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AIR CONDITIONING & REFRIGERATION News

THE NEWSPAPER OF THE INDUSTRY

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INSIDE DOPE

by GEORGE F. TAUBENECK

Story of the Week
Quotes of the Week
Verse of the Week
Like a Well-Fitting Glove
Sound Advice for Advertisers
Principles of Free Speech
Dances Wild Stories

Story of the Week

Russia's newest five-year plan was explained to an audience of workers in Smelldaworsk by a party commissar.

"The first year," he proclaimed, "all of you will have a bicycle. The second year you will get a motorcycle, maybe, and in five years you can have the use of an airplane. Men, think how wonderful that would be. Shoes might be available in Moscow on a certain day. With a plane you would be able to get there inside an hour!"

Quotes of the Week

"I believe that every right implies a responsibility; every opportunity, an obligation; every possession, a duty."—EDWIN MARKHAM.

"In the Pacific Northwest sea gulls near a fish cannery got their living on the material that was thrown out at a cannery which was out of date and was gradually closed down. After that the sea gulls slowly starved to death because they had forgotten how to fish."—*Beveridge Paper Co. Newsletter.*

"A man should never be ashamed to own he has been in the wrong, which is but saying, in other words, that he is wiser today than he was yesterday."—ALEXANDER POPE.

"I've noticed two things about men who get big salaries. They are almost invariably men who, in conversation or in conference, are adaptable. They quickly get the other fellow's view. They are more eager to do this than to express their own ideas. Also, they state their own point of view convincingly."—JOHN HALLOCK, Director of Personnel, University of Pittsburgh.

"Property is the fruit of labor; property is desirable; it is a positive good in the world. That some should be rich shows that others may become rich, and hence is just encouragement to industry and enterprise.

"Let not him who is houseless pull down the house of another, but let him work diligently and build one for himself, thus by example assuring that his own shall be safe from violence when built."—ABRAHAM LINCOLN.

"The most original modern authors are not so because they advance what is new, but simply because they know how to put what they have to say, as if it has never been said before!"—GOETHE.

"Experience should teach us to be most on our guard to protect liberty when the government's purposes are beneficent. Men born to freedom are naturally alert to repel invasion of their liberty by evil-minded rulers. The greatest dangers to liberty lurk in insidious encroachment by men of zeal, well-meaning but without understanding."—JUSTICE LOUIS BRANDEIS.

"I shall never permit myself to stoop so low as to hate any man."—BOOKER T. WASHINGTON.

"A friend is a present you give yourself."—ROBERT LOUIS STEVENSON.

"Don't expect too much of any set of rules. Think how long it is taking to put over the ones Moses presented."—DAVID BENTHAM.

"The executive's job is to train his people to think and plan and act for themselves. He simply hasn't enough hours or mental energy to keep on thinking and planning for them, or for pushing them into action."—*Wall Street Journal.*

"Babies born in the United States have a life expectancy of 70 years. Has civilization?"—T. W. JONES, in the *Toronto Star.*

(Concluded on Page 6, Column 1)

What Are Manufacturers Doing About Material Shortages?

DETROIT — What's happening to refrigeration, air conditioning, and major appliance products that have been made with scarce materials, the consumption of which in many cases has been ordered reduced by government order?

Are lines of merchandise being constricted, and are substitute materials being used on a broad scale?

Thus far, the buying public hasn't seen very much evidence of the effect of scarcities and restrictions in materials. But there is considerable planning and experimenting going on behind the scenes, which may show up in the not-too-distant future.

First, let's take the matter of reducing lines and cutting down the number of models:

It can be authoritatively stated that one leading manufacturer of refrigerators and other appliances is stopping production of home freezers, to concentrate all available materials on refrigerator production. The attitude of this company is said to be this: it entered the appliance field as a refrigerator manufacturer, and must keep refrigerators before the public even if other appliances are sacrificed.

Some other leading refrigerator manufacturers have discontinued production of their largest (and most material consuming) models. There have been some predictions that double-oven ranges will disappear. One manufacturer of broad lines of both major appliances and electric housewares is said to be considering cutting the number of models on all types of products by 50% or more.

There have been very few announcements of any "line cutting" by manufacturers of commercial refrigerators and air conditioning equipment. However, there is little question but that such manufacturers will restrict their lines to the most popular models if scarcities force them to constrictive measures.

Now, what about substitute materials.

On refrigerators, manufacturers are said to be experimenting with new shelving materials and finishes. There may be more plastic ice cube trays. Glass drip trays, meat dishes, and vegetable containers may return. Chrome trim may eventually vanish.

One manufacturer is now shipping electric ranges with black finished shelves instead of the customary shiny chrome plated racks. A dishwasher producer has made substitutions in more than a dozen parts.

(Concluded on Page 4, Column 3)

If Your Issue Is Late...

The "sick leaves" taken by railroad yardmen and the subsequent embargoes by various post offices on all but first class mail have resulted in the delay of delivery of the Feb. 5 issue to subscribers in several parts of the country.

Unless the situation is completely cleared up by the Feb. 10 weekend, it is possible that delivery of the Feb. 12 issue may be delayed also. The News regrets these delays, but is powerless to do anything about them in the face of post office rulings.

Steel, Alloy Cuts Seen For Non-Essential Items

WASHINGTON, D. C.—Makers of non-essential civilian goods will soon be ordered to reduce their consumption of steel. They will also be ordered to cut consumption of iron "hardening" alloys such as manganese, tungsten, and chromium.

The steel and ferro-alloys orders will be designed to alleviate shortages for military and essential civilian needs until an over-all "controlled materials plan" can be put into effect.

Nov. Refrigerator Sales Ran 78% Ahead of 1949

NEW YORK CITY—Sales of household refrigerators for November by 16 manufacturers reporting to the National Electrical Manufacturers Association totaled 411,201 units, the association announced recently.

This figure was 78% ahead of the same month in 1949 but 3% under that of October, 1950.

For the first 11 months of 1950, the 13 to 16 firms reporting throughout the year sold 5,454,311 units. In the comparable period of 1949 Nema firms had sold only 3,579,784 units.

Foreign sales showed a spurt during November that was not apparent in domestic sales. A total of 25,059 units were sold outside of the United States in November as compared with only 21,101 in October and 9,037 in November, 1949.

Plan for Freezing Profit Margins May Encounter Opposition

WASHINGTON, D. C.—A new regulation that would permit retailers to charge prices on the basis of current cost plus their "traditional" profit margin was expected from the Office of Price Stabilization over the weekend.

Such a regulation would have the effect of allowing dealers to relax the squeeze of costs that resulted when both wholesale and retail prices were frozen as of Jan. 25. This freeze caught some retailers before they could pass on added wholesale costs to their customers.

A series of questions and answers on problems relating to the General Ceiling Price Regulation appear on page 2. They are intended to clear up some common queries raised in the trade.

Though at press time, the contents of the order were not known, reports indicated that the profit margin freeze would allow dealers to add to their current costs the profit margins they used at some specific date in the past.

One report indicated that this base date may be prior to last June 25, when the Korean war started.

This report also said that the

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Refrigeration & Air Conditioning Groups Already Have Programs Under Way To Gain 'Fair Break' for Industry on Materials

* * *

'Improved Priority System This Time', Smith Predicts

BOSTON—Before long, some system of priorities will be set up to grant assistance to the more essential civilian requirements and manufacturers will be under a controlled materials plan of allocations, in the opinion of Fred W. Smith, president of Baker Refrigeration Corp.

Smith made these predictions in a recent address before the National Association of Refrigerated Warehouses. He spoke on the subject, "Refrigeration Equipment Availability—Today and Tomorrow."

At present, Smith is chairman of the Government Requirements Committee of the Air Conditioning & Refrigerating Machinery Association. During World War II, he was with the War Production Board as chief of the branch having jurisdiction over the commercial refrigeration, air conditioning, and food machinery industry.

Regarding priorities, Smith told the warehousemen: "The better understanding the government has of the essentiality of refrigeration and your dependence on refrigeration, the better will be your priority.

"After a year or more of constant hard struggle in the last WPB we finally got a reasonably good rating established for food processing and storage equipment. I hope it won't take us that long this time."

Regarding a controlled materials plan, Smith had this advice: "It behooves your industry then to get your claimant agency whom I presume will be Defense Transportation, Agriculture or both to substantiate our request for materials in your behalf."

Future availability of refrigeration products, Smith declared, "depends very largely upon what we

(Concluded on Back Page, Column 1)

* * *

Coggin Sees Good 'Selling' Job Vital to Industry

DALLAS—Industry efforts to impress government agencies with the importance of refrigeration to the American economy are quietly getting results, F. G. Coggin, manager of Detroit Lubricator Co.'s Refrigeration Division, told the Southwest Refrigeration Wholesalers Association.

Coggin spoke at the quarterly meeting of the association, held at the White Plaza hotel here recently. The meeting preceded by a day the opening of the 1951 Southwestern Refrigeration and Air Conditioning Conference, also staged here.

Coggin told the wholesalers that the Governmental Requirements Committee of the Refrigeration Equipment Manufacturers Association has been "extremely active."

As a result of the committee's efforts, he said, the National Production Authority has asked the group to submit the names of qualified individuals in the industry who could fill top positions in those branches which will administer the affairs of the refrigeration and air conditioning industry in the defense program.

"This has been done with the end result that we will be dealing with refrigeration men in government, men familiar with the industry and sympathetic to its problems," he declared.

Coggin reported that the Air Conditioning & Refrigerating Machinery Association was preparing a booklet telling "in a graphic and pictorial way the story of how many phases of our economy today are absolutely dependent upon mechanical refrigeration."

He said every individual interested in furthering the industry's partici-

(Concluded on Back Page, Column 3)

25% Excise Tax Proposal Will Face a Battle

Proposal by Snyder for Refrigerators, Appliances; Hits Low Income Buyer

DETROIT—Manufacturers and retailers of refrigerators and appliances, recovering from the first shock of the requested jump in excise taxes from 10% to 25% made by Secretary of the Treasury Snyder to Congress, began to react in various degrees of opposition to the proposal in rather short order after the announcement was made.

Here's what the new tax proposals would do:

Increase the manufacturers' excise tax from 10% to 25%.

Increase the tax on "electric, gas, and oil appliances" now subject to the manufacturers' excise tax (this includes electric and gas ranges and a number of other appliances), from 10% to 25%.

Place a 25% tax on the following electrical appliances not now covered: vacuum cleaners, washing machines, mangles, dishwashers, driers, sewing machines, floor polishers and waxers, garbage disposal units, and razors.

While no specific mention is made of either "home freezers" or "room air conditioners" it is felt that these products wouldn't be "overlooked" by any treasury tax experts who might draw up a Congressional bill.

Some manufacturers who assailed tax privately, said that they did not want to be quoted on their feelings about it for fear of being labeled "unpatriotic." Others pointed out that the proposals made no distinction between "necessary" and "luxury" items.

Kelvinator's President George W. Mason, interviewed as he arrived from a visit to the firm's plants in the British Isles, reportedly said that "Secretary Snyder is evidently proceeding along the lines that refrigerators are a luxury. The truth of the matter is that they are a necessity. We are faced with the necessity of stretching our food supplies and there is no greater method of food conservation than the refrigerator."

While most retailers realize that the threat of the tax will probably step up consumer buying momentarily, in the long run increased costs to consumer will shrink the over-all market for such products.

As Mort Farr, president of the National Appliance & Radio Dealers Association, puts it: "The proposed tax would place the appliances affected out of the reach of the average working man."

That may be the prime argument against the tax—that it will operate against the laborer who will most need the appliances to keep himself and his home at top operating efficiency.

Sales Meeting Views New 'Bakeraire' Line

SOUTH WINDHAM, Me.—A new line of 1951 "Bakeraire" air conditioning units built in capacities of 3, 5, 7½, and 10 tons and reportedly featuring "greater cooling efficiency in a more compact design" was introduced at a recent three-day meeting of Baker Refrigeration Corp.'s national sales organization.

Also announced were these other design improvements: Full-capacity reduction for larger Baker "Freon" compressors; a new condenser for the Bakeraire; and a new "low-cost" cleanable air filter. The company said full-capacity reduction "makes possible a wide range of operating capacities from 100% to 17%."

Cooling efficiency of the Bakeraire units is said to have been increased through a new cooling coil in the compressor compartment to dissipate heat. Noting other design changes, the company pointed out that:

1. Over-all height has been "substantially reduced" in every model.

2. Each unit is constructed with a one-piece rigid steel frame and a removable plenum designed for front or rear discharge.

(Concluded on Page 4, Column 2)

Official Questions and Answers on Price Freeze Regulations

WASHINGTON, D. C. — For the guidance of businessmen and consumers, the Office of Price Stabilization recently issued the following list of questions and answers applying to the General Ceiling Price Regulation.

These questions and answers, it was pointed out, are for information only and do not constitute legal ruling, which will only be issued on specific cases.

Editor's Note: The Office of Price Stabilization is expected to issue a freeze on dealers' profit margins which will take them out from under the General Ceiling Price Regulation. When announced, this order may make many points covered here obsolete for the retailers covered. However, even if the profit margin freeze order for retailers is announced, these questions and answers will still apply to wholesalers, manufacturers, and retailers of services who are not expected to be covered by the new ruling.

Q. A wholesaler of hardware has been invoiced since Jan. 25 at prices higher than those established by him up to midnight, Jan. 25. The customary method of pricing in this branch of the industry is to apply a markup on their cost. Can he establish his present prices on the basis of cost reflected in the invoices?

A. No, since these goods were not offered for delivery by this wholesaler in the base period at the increased price passed on to him by the supplier, the wholesaler must hold his ceilings to the highest price at which these goods were delivered by him during the base period.

Q. A service operator announced a price increase in the newspapers on Jan. 25, 1951. Is this new price legal?

A. The fact that increased prices for services were publicly announced prior to Jan. 25, does not *per se* justify the establishment of these increased prices as the legal ceiling. The determinative factor is, were these services "delivered" at the higher price during the base period. If they were not "delivered" at the higher price during the base period, then the increases are not allowed under the regulation. To be "delivered," the service must actually have been furnished to a customer.

Q. I am a distributor of wall paints and papers. On Jan. 15, 1951, the price to me of my supplies was increased. I delivered at the new prices during the base period. However, my retailer customers did not receive their price lists from the manufacturer until this morning. May the retailers now increase their prices? They made no deliveries at the new prices during the base period.

A. No. The retailers may not increase their prices. Their ceilings are the highest prices they were delivering at during the base period.

Q. I am a retail seller of rugs. I have a competitor who increased his price on Jan. 23. I did not increase my price prior to Jan. 25. May I increase my price to meet my competitor's price?

A. No. Your ceiling price is the price at which you delivered the commodity during the base period. There is no provision for increasing prices to meet a competitor's increase.

Q. I sell veal to retail stores and to chain stores. During the base period I had one price for the retail stores and another for the chains. Am I frozen at a different price for each class?

A. Yes.

Q. With reference to Section 20, a number of taxes collected by the seller are taxes actually imposed at manufacturing level. For example, on a television set, the manufacturer quotes his price plus tax; the wholesaler adds to this his markups plus his tax, and so on, until all of the taxes imposed at each stage are actually paid by the purchaser of the set. Does the order affect this procedure?

A. If the price charged by a seller during the base period included the taxes imposed at prior stages of manufacture or distribution, that price is the established ceiling price. Thus he continues to pass on the taxes indirectly since they are already reflected in his ceiling. The only additions to the ceiling prices permitted by Section 20, are: (A) The amount of any excise, sale, or similar tax paid directly by the seller and then only if during the base period such person stated and collected such taxes separately from his selling price; and (B) if an excise tax is imposed on the seller by a law effective hereafter, it may be collected by him from the purchaser (if not prohibited by the tax law). The amount of the tax must be stated separately.

Q. I am a wholesaler and I am pricing an item which is not the same as any I sold during the base period. I am therefore taking the percentage markup of a comparison item in the same category. I understand that I must calculate this markup on the basis of my most recent net invoice cost for the comparison. How do I determine what is my most recent net invoice cost?

A. You are pricing under Section 5 of the regulation (applicable to wholesalers and retailers) under which your most recent net invoice cost for the comparison item is the net invoice cost for the last shipment which you received.

Q. The highest price at which an article was delivered by a retailer during the base period was $5. No sale was made to a teacher during that period, but it was the retailer's customary practice to allow teachers a 10% discount. What is the ceiling price for the sale of that article to a teacher?

A. $4.50 is the ceiling price to a teacher for that article. The regulation requires that the ceiling prices reflect customary price differentials.

Q. An article was delivered by a retailer all during the base period at 10 cents each, three for 25 cents. What is the ceiling price for the article?

A. The ceiling price for that article is 10 cents each, three for 25 cents. The retailer must continue to allow his customary discount for quantity purchases.

Fire Destroys Warehouse, Office of Carolina Sales

GREENVILLE, N. C.—The home office building and warehouse of the Carolina Sales Corp. here, which distributes Philco refrigerators and other appliances throughout North Carolina and several adjoining states, was completely destroyed by fire of undetermined origin Feb. 4. The loss from the fire was estimated at $200,000.

The home office of the Refrigeration Discount Corp., which was housed in the Carolina Sales Corp. building, also was destroyed. The fire damaged office records of both firms, it was stated.

Ohio Bill Would Curb Public Utility Sale, Lease of Appliances

COLUMBUS, Ohio—Public utility corporations would be prohibited from selling or leasing gas and electric appliances in competition with independent appliance companies under terms of a bill introduced in the Ohio Legislature Jan. 30 by Rep. John C. Smith, Montgomery Democrat.

The measure provides, however, that utilities would not be prohibited from furnishing or making repairs to such equipment to maintain service.

In explaining the purpose of his proposed legislation, Smith declared:

"I feel the present practices of the public utility companies are seriously endangering the future of certain groups of independent businessmen. I specifically point to the practice of selling gas and electric appliances on the open market in direct competition with free independent appliance companies.

"The State Utilities Commission sets rates the utilities companies may charge for their services, whereby they may make a fair profit. The independent company has to fight and scratch for its bare existence. There is no place for that sort of practice in our present economic setup," Smith concluded.

Some Defense Materials And Services Exempted From Price Regulation

WASHINGTON, D. C. — Certain purchases and sales of defense materials and services have been exempted from the General Ceiling Price Regulation in a supplementary ruling issued recently by the Office of Price Stabilization, Economic Stabilization Agency.

The OPS stated, in issuing the ruling, "Many commodities and services purchased by the defense agencies are of a strictly military nature and the imposition of price ceilings upon them is not practical or advisable because of frequent changes of specifications or production plans or because of variations in the conditions under which contractors and subcontractors operate.

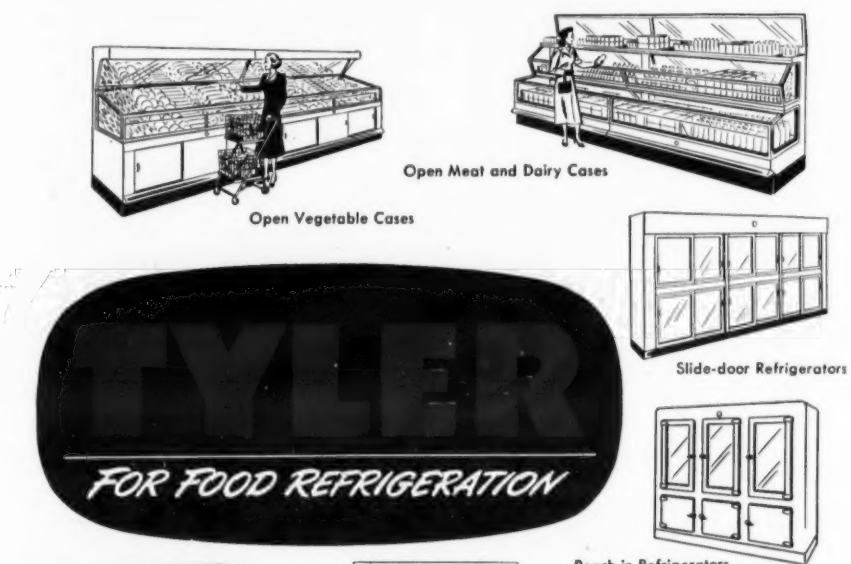
"Moreover, there are certain types of purchases, such as emergency purchases, and purchases under secret and developmental contracts for which the price control techniques of the General Ceiling Price Regulation are not suitable.

"Experience has indicated that in such cases and in the case of commodities especially designed for military needs, prices can be best controlled by the defense agencies themselves either in the original negotiation or in renegotiation provided for by law to eliminate excessive profits."

Among the commodities mentioned as being exempt from price ceilings when specially designed to meet military needs are shipboard water coolers and water purification equipment. Among the services mentioned are repairs to and maintenance of boats, ships, and vessels.

Williams Heads Shreveport Appliance Dealers Club

SHREVEPORT, La. — Gross Williams, vice president of Shreveport Refrigeration & Appliance Co., is the new president of the Electrical Appliance Dealers Club of Greater Shreveport, Inc. V. N. Ashley was named vice president, and V. W. Willoughby, secretary-treasurer.



OVER 400 MODELS in the Tyler line of Commercial Refrigerators of all types!

The regular Tyler line meets every essential food refrigeration requirement for food stores, restaurants, hotels, institutions. Recent developments include open, refrigerated display cases with High Level Refrigeration and other Tyler features—for fast, self-service merchandising of meats, vegetables, dairy products. Save time for clerks—save time for customers!

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DIFFUSING TYPE UNIT HEATERS

FOR LOW PRESSURE STEAM & HOT WATER

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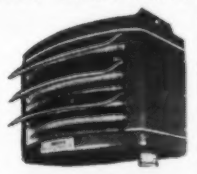

Wall Model 6 WH

Manufactured by MERCHANT & EVANS CO. PHILADELPHIA 46, PA.

Write For Catalog

PAGE after PAGE tells this story

Want to save time, trouble, and profit-eating call-backs on your refrigeration control replacements? Then make the Cutler-Hammer refrigeration control catalog your standard guide on replacements. Here you will find "specific-fit" units which are not merely listed but already manufactured by Cutler-Hammer for more than 1,000 individual refrigerator models which the industry has produced since 1925. No "modifying", no fussing, no compromises, when you put in C-H "specific-fit" replacement control units. And you'll also quickly see how the widely-known Cutler-Hammer name (advertised in The Saturday Evening Post, Time, Newsweek, American Home, Better Homes & Gardens, House & Garden, etc.) builds customer confidence and good will. The C-H refrigeration control catalog, as well as the items you need, are available through your authorized C-H refrigeration wholesaler. Do not forget, this C-H refrigeration control line includes the outstanding *general purpose* replacement control (9521N9) for use with motors having "built-in" overload protection. CUTLER-HAMMER, Inc., 1362 St. Paul Avenue, Milwaukee 1, Wisconsin.

You *know* you're right when you use C-H "specific-fit" controls

9521N43 C-H "specific-fit" for Briggs 1938 models
9521N85 C-H "specific-fit" for Philco 1940 models
9502N376 C-H "specific-fit" for Mayflower and Trupar 1933-34-35-36 models
9521N56 C-H "specific-fit" for Gale 1941 models
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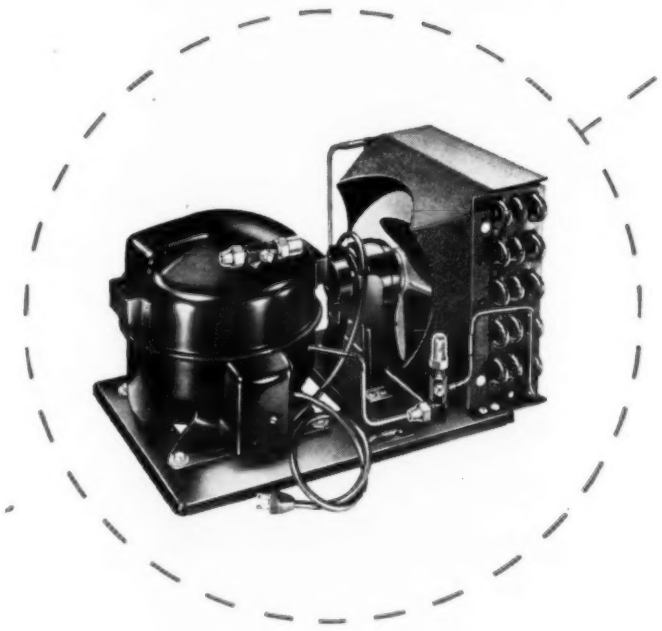
MOTOR CONTROL
C-H
9502N95 C-H "specific-fit" for Moffat 1936-37 models

Featured by Cutler-Hammer refrigeration wholesalers and recommended by alert service dealers from coast to coast.

IT'S A TECUMSEH HERMETIC THAT KEEPS THOSE DRINKS SO REFRESHINGLY COOL



Always a cold bottle in the customer's hand . . . this is the one great objective of the beverage industry, for everything depends on *temperature at point of sale.*

When the refrigerating unit is out of order, sales stop as effectively as though the machines were empty.

That is why manufacturers of vending and dispensing beverage coolers need the quiet, dependable, efficient operation of Tecumseh Hermetics. That is why more than one-half of all beverage coolers made are equipped with Tecumseh. That is why bottlers insist on Tecumseh.

Yes, Tecumseh's popularity among manufacturers is assured because they know that *temperature at point of sale* is important, and a Tecumseh Hermetic is the best insurance that their beverage will always be at the ideal drinking temperature.

Let us send you the story about Tecumseh's Hermetics and how they may help you in designing that new beverage dispenser or vendor.

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★ The world's largest producer of compressors and condensing units for the refrigeration industry. ★

Easy To Halt Output of 'Whirldry' Temporarily To Handle Army Order

SYRACUSE, N. Y.—Barring all-out war, Easy Washing Machine Co. will have a combination civilian-military production program during the emergency period, H. Paul Nelligan, president, disclosed in announcing that the company plans to temporarily discontinue output of its "Whirldry."

He said production of the line will be halted so Easy can turn out $1,525,000 worth of ammunition fuses for the Army. Addressing the annual dinner meeting for employes who have been with the company for 10 years or more, Nelligan stated:

"We are going to discontinue production of the Whirldry, ironer and wringer model, for the time being—probably between April 1 and May 1—by a gradual process. We probably will begin this month to cut down on the production of these products. We are negotiating on defense contracts with the Navy and the Air Force.

"Operations at Easy will be different during this period of national emergency than during World War II. We still are going to continue making the washing machines—unless we get into an all-out war. We will have a combination program."

WHY WAIT?

Get your new product info pronto. Use coupon on "What's New" page this issue

'Bakeraire' Line--

(Concluded from Page 1, Column 5)

3. "Extreme" quietness of operation is provided by means of vibration eliminating spring compressor mountings.

4. New water and drain connections make installation "easy and fast."

5. Exterior cabinet design is modeled in smooth, unbroken lines with a new, highly durable "Baker gray" finish that is "easily cleaned."

Supplied with either open-type or hermetic compressors, the new line will be available for early spring delivery.

New sales policies developed "to assure equitable distribution of Baker equipment in today's market" were presented along with the 1951 advertising and promotion program—largest in Baker's history.

Copper Order Eased for Plants Shut Down In '50

WASHINGTON, D. C.—The National Production Authority has relaxed its copper-restricting order for those users whose operations were shut down for more than 15 consecutive days in the first half of 1950.

In such cases, the agency has decided, these users may omit the month or months in which the shutdown occurred in figuring up the monthly use average. The original order restricted use of copper and copper-base alloys to a certain percentage of their average monthly consumption in the first six months of last year.

Effect of Shortages--

(Concluded from Page 1, Column 3)

Steel is substituted for brass in many of the parts. The dish racks are of plastic-coated steel wire instead of brass. The silverware "basket" has also been changed to plastic from brass. Another range manufacturer has substituted steel tubing for aluminum piping to carry gas to the burners.

A refrigerator firm that is working with a ceramics manufacturer on a substitute for cobalt oxide in porcelain enamel processing says that preliminary tests of the new material have been "excellent." A large scale trial run is to be undertaken soon.

Other appliance manufacturers have voiced the opinion, however, that "if we can't get porcelain enamel because of the cobalt shortage we may be forced to finish our ranges with synthetic paints." Some experimentation is taking place on the use of a plywood-plastic combination for interiors of home freezers.

In the television field, Philco is rumored preparing a demonstration for the government that will show an "austerity chassis" that through the use of selenium rectifiers and other substitute materials, may save up to 50% or more of the copper, cobalt, and nickel used in television receivers.

Lee Handles Whirlpoo In East

BUFFALO—The Lee Distributing Co., 350 Seneca St., has been appointed area distributor for Whirlpool washers, driers, and ironers. Its territory will cover western New York and northern Pennsylvania.

Servel Strives To Lower Refrigerator Prices

EVANSVILLE, Ind.—An effort to reduce the prices of its 1951 line of household refrigerators now going into production will be made by Servel, Inc., according to W. Paul Jones, president.

Jones said the company will attempt to lower prices in order to increase sales more than the 50% rise recorded for the fiscal year of 1950. Retail prices of the new line will be announced early in March.

In its annual report just issued, Servel said it plans to continue production this year as long as materials are available.

The company reported that total sales in the year ended Oct. 30 were $57,333,511, compared with $42,204,153 in the preceding fiscal year. Household refrigerator sales accounted for 73.22% of the company's dollar volume, against 77.16% in fiscal 1949 and 88.40% in fiscal 1948.

Artkraft Gets Big Defense Order for Powder Cans

LIMA, Ohio—Artkraft Mfg. Corp. has received an initial order for 200,000 galvanized powder cans for the Bureau of Ordnance and production will start at the rate of 1,000 a day within the next 60 days, President Morton L. Clark has announced.

This initial defense order amounts to approximately $1,000,000, and Artkraft is also negotiating for other similar prime contracts, Clark said.

Defense work will not interfere with the company's civilian production of domestic refrigerators, beverage coolers, and signs, which will continue in line with the ability to obtain raw materials, he added.

Fedders Leases Warehouse

BUFFALO—Fedders-Quigan Corp. has leased 17,000 sq. ft. of floor space in a warehouse at 277 Military Road.

November Refrigerator Sales Show Big Increases Over Same Period In '49

Summary for November and First 11 Months, 1950
Complete Refrigerators Only—Sales by Sizes—Units

NOVEMBER (16 Companies)

	Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1.	Less than 4 cu. ft.	754	....	303	1,057
2.	4 cu. ft.	2,468	....	253	2,721
3.	5 cu. ft.	20	....	....	20
4.	6 cu. ft.	44,492	....	3,171	47,663
5.	7 cu. ft.	30,366	1,365	4,514	36,245
6.	8 cu. ft.	126,923	....	7,922	133,945
7.	9 cu. ft.	81,570	239	3,600	85,409
8.	10 cu. ft.	53,787	60	1,941	55,788
9.	11 and 12 cu. ft.	46,662	....	1,691	48,353
10.	13 cu. ft. and up	....	....	....	....
11.	**Total**	**386,142**	**1,664**	**23,395**	**411,201**

FIRST 11 MONTHS (16-13 Companies)

	Sizes	Domestic (48 States and D. C.)	Canadian	Other Foreign	Total
1.	Less than 4 cu. ft.	3,116	....	547	3,663
2.	4 cu. ft.	36,204	....	3,961	40,165
3.	5 cu. ft.	405	....	2	407
4.	6 cu. ft.	555,840	1,409	40,247	597,496
5.	7 cu. ft.	644,583	2,802	34,273	681,658
6.	8 cu. ft.	1,772,671	642	58,401	1,831,714
7.	9 cu. ft.	1,121,595	942	20,488	1,143,025
8.	10 cu. ft.	500,945	1,144	11,216	513,305
9.	11 and 12 cu. ft.	619,650	63	11,287	631,000
10.	13 cu. ft. and up	11,813	....	65	11,878
11.	**Total**	**5,266,822**	**7,002**	**180,487**	**5,454,311**

Participating companies: Admiral Corp.; Avco Mfg. Corp.; The Coolerator Co.; Deepfreeze Appliance Div., Motor Products Corp. (in 7-1-50); Frigidaire Div., General Motors Corp.; General Electric Co.; Gibson Refrigerator Co.; Hotpoint, Inc.; International Harvester Co.; Kelvinator Div., Nash-Kelvinator Corp.; A. J. Lindemann & Hoverson Co. (in 2-1-50); Norge Div., Borg-Warner Corp.; Refrigeration Div., Philco Corp. (in 8-1-50); Sanitary Refrigerator Co.; Seeger Refrigerator Co.; Westinghouse Electric Corp.

In refrigeration tubes, there's a whale of a difference! Speaking for ourselves, it's like this: First, we use high-grade tool steel plugs, give them a "super finish," then a chromium plate to resist abrasion. That accounts for the mirror-smooth, accurate bore.

Next, the extensive use of carbide dies with their traditional wear resistance—and given a super-finish comparable to the plug—accounts for the uniformly high finish and accuracy of the O.D.

Then the tubes are thoroughly cleaned and dehydrated, crimp-sealed, uniformly annealed for easy bending and flaring – and packed in single-coil cartons.

Extra bother? Of course! But it makes for extra value . . . for our constant goal is to produce tubes that have no flaws, no pinholes, no lap seams, no dirt, no excuses. *One* organization is responsible for every step of production . . . from mine to finished product.

ANACONDA Refrigeration Tube is sold by jobbers. The American Brass Company, Waterbury 20, Connecticut. In Canada, Anaconda American Brass, Ltd., New Toronto, Ont. 5019

the name to remember ANACONDA®
REFRIGERATION TUBES

OTHER ANACONDA PRODUCTS FOR THE REFRIGERATION INDUSTRY
Restrictor Tube
Bourdon Tube
Thermal Expansion Bulbs
Formed Tube Parts
Hard Copper Tube cut to length
Copper Water Tube in coils or straight lengths
Fittings
Vibration Eliminators
Charging Hose
Flexible Refrigeration Tubing Conduit

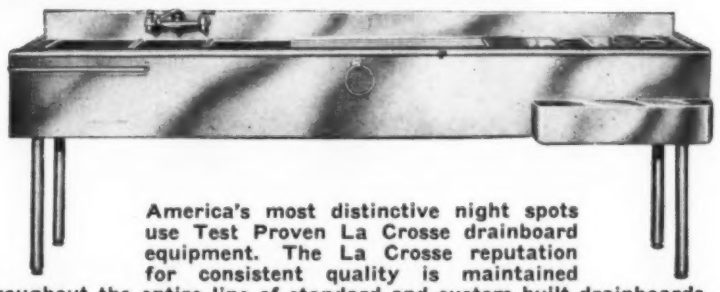
ONE LA CROSSE PRODUCT SELLS ANOTHER

Time tells—performance sells!! Again and again La Crosse is proved best by test.

"YUKON" WALK-IN COOLER

First for quality and efficiency . . . constructed of quality, kiln dried ¾" fir—tongued and grooved . . . walls 5⅛" thick . . . floor with lift strips for better ventilation . . . 3⅝" Fiberglas insulation throughout, for durability and dependable service . . . attractively finished . . . available in any size with accessories.

STAINLESS STEEL DRAINBOARDS



America's most distinctive night spots use Test Proven La Crosse drainboard equipment. The La Crosse reputation for consistent quality is maintained throughout the entire line of standard and custom built drainboards . . . in a wide variety of models and sizes. STAND OUT VALUES AT LOW COST!

LA CROSSE COOLER CO.
2801 LOSEY BLVD., SO. LA CROSSE, WIS.

Export Representatives: Melvin Pine & Co.,
80 Broad St., New York, N. Y. Cable Address: Eximport

What a story to tell and sell! (What a difficult story to sell against!)

ONLY NORGE

ORIGINATORS AND WORLD'S LARGEST MANUFACTURERS OF SELF-DEFROSTING REFRIGERATORS

DARES TO TELL THE WHOLE TRUTH ABOUT SELF-DEFROSTING!

NORGE eliminates any possibility of "warmed-over" food odors!

NORGE has no hidden drain pipes that can't be kept clean!

NORGE never upsets a schedule with "surprise defrostings" or none at all!

NORGE never builds up frost that has to be scraped or chipped away!

and . . . **NORGE** offers "out of this world" convenience at down to earth prices!

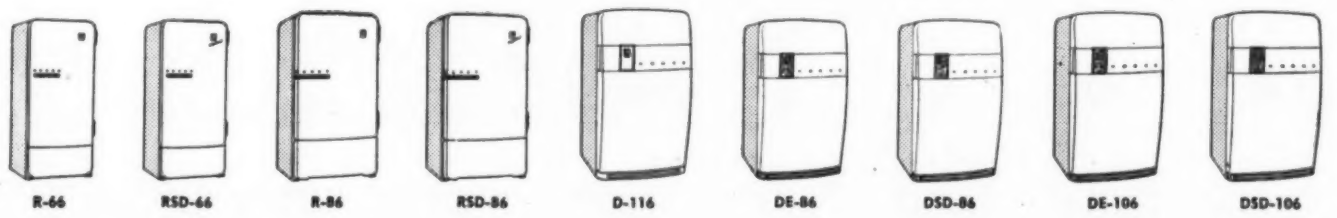
See for yourself how much NORGE offers!

14,000 dealers must be right! Norge for 1951 is "out of this world" for "sell-ability" that means top profits. Here is a complete line of quality products loaded with features—and with logical step-up prices. A line that's backed by the greatest advertising campaign in Norge history. Yes, this year more than ever—Norge is the line that *delivers* for the dealer!

New NORGE JET SELF-D-FROSTER

(Model DSD-86)
most convenient refrigerator ever designed!

9 great NORGE models—with logical step-up prices!



NORGE

. . . THE LINE THAT DELIVERS FOR THE DEALER!

INSIDE DOPE

by GEORGE F. TAUBENECK

(Concluded from Page 1, Column 1)

"Never before in the history of the world has a major nation lost so many of its objectives through the executive conduct of its foreign affairs as has this nation in the last five years." — HAROLD E. STASSEN, President, University of Pennsylvania.

"You cannot trust the battle of freedom to Socialism. Socialism is the very negation of liberty. Socialism means the community in bonds.

"It is like the sand of the desert. It gets into your food, your clothes, your machinery, the very air you breathe. They are all gritty with regulations, orders, decrees, rules. That is what Socialism means."— DAVID LLOYD GEORGE, British statesman.

Verse of the Week

I am only one,
But I am one;
I cannot do everything,
But I can do something.
What I can do
I ought to do.
And what I ought to do
By the grace of God I will do.

—CANNON FERNER.

Like a Well-Fitting Glove

So far as possible, a salesman should be assigned to cutivate a territory inhabited by people who have backgrounds, tastes, and temperaments similar to his own.

Don't bring the "country cousin" to the city, or expect the "city feller" to go great guns in a rural area.

A salesman gets on better with "his own people" than he does with dissimilar groups.

Examples: Assign negro salesmen to negro areas, Polish-speaking salesmen to Hamtramcks, Italians to the spaghetti restaurants, etc.

It is helpful, also, to give each salesman, as prospects, people he knows personally—if this can be done without scattering his territory too far and wide.

However, transferring a veteran salesman from a good old territory to a new one (where your product as yet has little acceptance) strictly on the basis of his social acceptance category—often may strike a deadly blow at the experienced salesman's confidence.

Sound Advice for Advertisers

Good advertisements should be repeated, and such repetition is economical according to a majority of the sponsors of The Cooperative study of Effectiveness of Repeated Advertisements.

In a follow-up report to its first analysis, the steering committee of this study group revealed that 91% of 160 sponsors are repeating advertisements regularly. Questionnaires were sent to each of the 302 advertiser and agency sponsors or purchasers of the report.

The original study concluded that readership percentages of repeated advertisements are at least as great as the original insertion, and often much more effective the second, third, fourth, and fifth time they are seen.

Many of the surveyed sponsors pointed out that "the study supported what we have believed for years." All but 1% of the respondents comments favorably on the value of repetition.

Savings in production costs, and increased flexibility in coverage without increased expense, were emphasized by economy-minded advertisers and agencies. Favorable replies stressed the use of copy testing to determine what advertisements should be repeated; and 13% of the respondents indicated they had repeated good ads in one manner or another in 30 or more publications.

The few non-repeaters were organizations that required diversified advertising because of wide product lines, seasonal markets, or specific campaign objectives which weren't compatible with repetition.

A continuation of this examination and further studies of its type were urged by 34% of those surveyed.

There is overwhelming endorsement of advertising repetition when applied within the limits of common sense and the defined objectives of a given campaign.

Principles of Free Speech

Principles which affect free speech, as outlined by U. S. Judge Harold Medina to the jury which convicted the 11 Communist leaders in New York, are interesting indeed. Quoting Judge Medina:

" . . . These defendants had the right to advocate by peaceful and lawful means any and all changes in the laws and in the Constitution; they had the right to criticize the President of the United States and the Congress; they had the right to assert that World War II, prior to the invasion of Russia by Germany, was an unjust war, an imperialist war and that upon such invasion it became a just war worthy of all material and moral support; and they had the right publicly to express these views orally and in writing. They had the right thus to assert that the government was at all times exploiting the poor and worthy workers for the benefit of the trusts and monopolies.

"They had a right thus to assert that what they call the democracy of Russia is superior in all respects to American democracy. They had a right thus to assert that the Marshall Plan was a mistake, that billions of dollars should be loaned to Russia and that legislation adversely affecting Communists should not be passed. Whether you or I or anyone else likes or dislikes such or similar and analogous views . . . is . . . not entitled to the slightest consideration in deciding this case. Unless a minority had a right to express and to advocate its views, the democratic process as we understand it here in America would cease to exist and those in power might remain there indefinitely and make impossible any substantial changes in our social and economic system. . . .

"I charge you that if the defendants did no more than pursue peaceful studies and discussions or teaching and advocacy in the realm of ideas you must acquit them. . . . Do not be led astray by talk about thought control, or putting books on trial. No such issues are before you here."

Three cheers for Judge Medina!

Deuces Wild Stories

Almost at the moment when American participation in World War II was legalized, a large passenger liner was steaming across the Atlantic. A couple of card-sharps, having heard the bad news, met uneasily in the saloon.

"Say, Joe," mused the first and larger of the two, "what would you do if a torpedo hit our ship right now?"

"You might not believe it," replied the gambler's stooge, "but I'd recite the Lord's Prayer."

"Hah!" scoffed the first. "You? Bet you a 'century' you don't even know the first line."

"I'll take that bet. Listen: 'Now, I lay me down to sleep,' etc. etc."

"Jeez, fella," acknowledged the gambler, respectfully, "I didn't think you knew it. Here's your C-note."

"And now, in conclusion," perorated the women's-club lecturer, "let me say that any woman who is a good poker player will be successful in any type of job!"

Silence reigned, pregnantly.

"Are there any questions from the audience?" challenged the lecturing psychologist.

An overweight *hausfrau* arose and held up her right hand.

"Yes, Doctor," she boomed out. "I'd like to know why a good poker player would need a steady job!"

"We are told by ancient philosophers," jibed the one idealist in a Saturday night poker game, "that the best way to enjoy life is to fall in love with a beautiful woman or with a great problem."

"Errumph!" grumbled another poker player, sourly.

"I did the former and now I have the latter!"

And the game proceeded, silently.

A sports star whom you probably know quite well by reputation is a militant advocate of "straight" poker (nothing wild). In a hotel room one night he entangled himself in a dealer's-choice game with several long-time friends. One of the latter "ribbed" this conservative poker player by announcing:

"Five-card draw, one-eyed jacks wild, aces to open. If aces don't show up in the first hand, it takes two pairs to open. After that, three of a kind, a straight, a flush, and so on up."

Our conservative hero growled, grunted, and niff-nawed. But he stayed. Hand after hand was dealt, and the antes boosted the pot enormously because nobody could open.

After the six players had drawn cards for more than an hour, Our Hero, the fellow who hated wild games, raked in an $800-plus pot by laying down a royal flush in spades —including the two one-eyed jacks!

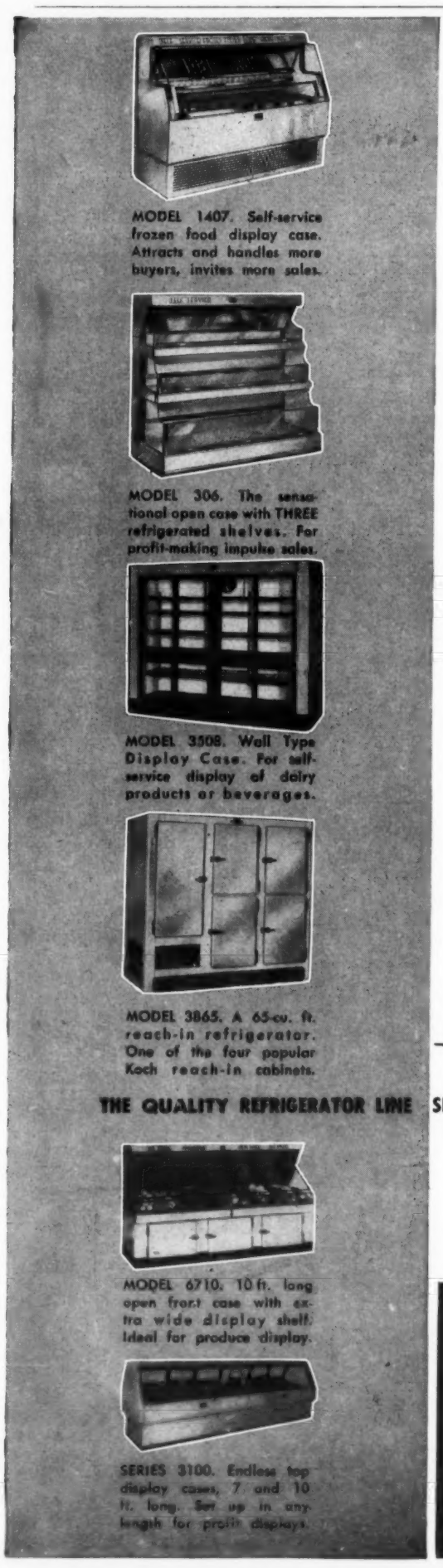
There must be a moral to this story . . . somewhere. . . .

Bridge, poker, pinochle, gin-rummy, and Canasta are all "sports," we suppose. But the people who play these deathly card games "for keeps" aren't always sportsmen in the true sense of that magnanimous word.

Post-mortem arguments which dog the cabooses of family-neighbor card games are anything but sportsmanlike. Too frequently they're upsettingly vituperative. Example:

"All right, wise guy, how'd *you* have played that hand?"

"Under an assumed name."



MODEL 1407. Self-service frozen food display case. Attracts and handles more buyers, invites more sales.

MODEL 306. The sensational open case with THREE refrigerated shelves. For profit-making impulse sales.

MODEL 3508. Wall Type Display Case. For self-service display of dairy products or beverages.

MODEL 3865. A 65-cu. ft. reach-in refrigerator. One of the four popular Koch reach-in cabinets.

THE QUALITY REFRIGERATOR LINE

MODEL 6710. 10 ft. long open front case with extra wide display shelf. Ideal for produce display.

SERIES 3100. Endless top display cases, 7 and 10 ft. long. Set up in any length for profit displays.

LOW

Low **and** wide—the new KOCH Series 700 proves that **the more they SEE, the more they'll BUY!** And there's **no** limit . . . with basic 7-ft. and 10-ft. lengths that can be joined for endless Self-Service meat display, serviced front **or** back. Hermetically-sealed triple-plate glass front, set in fadeproof white porcelain, framed in stainless steel. Welded steel construction. Adjustable, heavily tinned shelves. Factory-tested refrigeration of ample capacity.

AND

Simply add the **Salesmaker** superstructure for a terrific **shopper stopper.** Fluorescent lights. Sliding mirrors for service from the rear . . . selling from the front.

BEHOLD!

The advantages are plain to see—cost-cutting service from the rear and profitable self-service from the front. You'd better look twice at these money-making cases . . . you can bet your customers will.

KOCH REFRIGERATORS

SINCE 1883 NORTH KANSAS CITY 16, MO.

SEND THIS COUPON today FOR FULL DETAILS

KOCH REFRIGERATORS
North Kansas City 16, Missouri RN 3

Please send to me at once complete details on your dealer proposition. I understand several attractive territories are available.

Name.....

Address.....

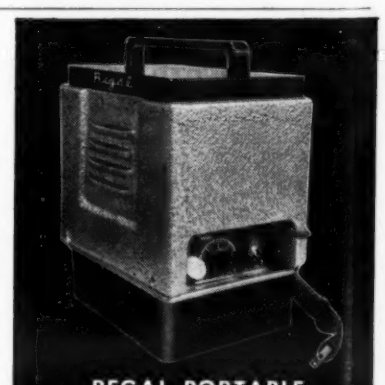
City.....Zone.....State.....

A NEW PROFIT-MAKER to add to both existing and new installations

Glycolator

Control of Air-Borne Virus and Bacteria

The automatic GLYCOLATOR vaporizer is a profitable item with a potential on every existing heating or air conditioning job and every new one. Made as a portable . . . for attachment to forced air furnaces . . . or for large commercial installations, the method sells on sight when explained. GLYCOLATORS come in sizes for every installation.



REGAL PORTABLE
Treats up to 100,000 cu. ft. per hr.

FURNACE MODEL
For forced air systems

COMMERCIAL MODEL
For large air conditioning or warm air heating systems

WRITE Glycolator DIVISION
IRON CITY CHEMICAL COMPANY
VALENCIA, PA.

DEALER and DISTRIBUTOR OPPORTUNITY

A few selected territories are being opened for distributors and dealers. Write on your letterhead for specific information and sales plan.

Lewyt Sets Up Plan To Use Distributors In Expediting Materials, Sub-Contracting

BROOKLYN—To meet the possibility of all-out war production, Lewyt Corp. here, presently making Lewyt vacuum cleaners for the consumer and electronic equipment for the government, has begun a Mobilization Plan for Appliance Distributors, Alex Lewyt, president of the firm, disclosed recently in a Washington interview.

This Lewyt Mobilization Plan, Lewyt says, will be set up to mobilize, train, and utilize as a nationwide force for expediting and for sub-contract operations the 75 wholesale distributors of the Lewyt vacuum cleaner.

These distributors will add to Lewyt's production capacity an estimated 5,000,000 sq. ft. of manufacturing space and a possible pool of 5,000 skilled and semi-skilled personnel. Many of Lewyt's distributors are equipped with machinery, and all of them are equipped with electronic test equipment now being used in the testing and servicing of television sets.

Lewyt said that "The Lewyt Plan for Mobilization of Appliance Distributors" is already partially in operation. "The first phase is Utilization of Distributor Organizations for Expediting Critical Defense Materials.

As materials required for government contracts, present and future, become more difficult to procure, more and more expediting will be necessary with suppliers of critical components. These suppliers are spread out in many parts of the country and can be contacted quite easily by Lewyt's present vacuum cleaner distributors.

With re-engineering and use of alternate materials, Lewyt is confident he will be able to manufacture his vacuum cleaner in fairly good quantities during the first six months of 1951.

The "Mobilization Plan" is his preparation for the eventuality of an all-out war effort.

Lewyt stated that he believes the plan for utilizing distributors can serve a very important function to the nation, its economy, and state of preparedness. It would:

1. Furnish the government with a network of productive capacity which normally might not be used in a war effort.

2. Spread government business during a "guns-and-butter" economy to small business.

3. Allow distributors to maintain at least a part of their organizations, so vital in a return to normal business.

4. Reduce the number of private enterprises which will find it impossible to survive in these unparalleled times.

5. Enable American business to contribute, in still another way, towards maintaining the American way of life.

Lewyt Corp. has already called in its own 12 district managers in the Vacuum Cleaner Division, and given them a thorough training period and background in the contract manufacturing end of the business. Already several of these men have expedited material and parts for Lewyt's defense contracts. They will serve as liaison between the Brooklyn plant and the sub-contracting operations.

Beverage Cooler Serves As Hospital Blood Bank

ST. LOUIS—Refrigerating plasma units, and containers of freshly-drawn blood, instead of bottled soft drinks, a Jewett cylindrical-type refrigerated beverage display case has proven an ideal "blood bank" at the Missouri Pacific hospital here.

The big refrigerator, 8 ft. high, 3 ft. in diameter, and equipped with a narrow, curved glass door, which gives access to six revolving disk shelves within, has been purchased by H. J. Mohler, hospital supervisor, and permanently installed in the laboratory on the first floor.

Requiring only a 3-ft. circle of floor space, the blood-bank refrigerator is set up in a hallway at the rear of the laboratory, where it may be easily reached.

Each level of the display refrigerator is reserved for a specific type of blood, the fact labeled on a narrow strip sign around the rim of the revolving shelf. A ½-hp. self-contained condensing unit holds 35° F.

Air Conditioning Is 'Must' In Hotels, Costs Nothing, Realty Official Declares

ATLANTA—Air conditioning is a complete "must" in a modern hotel, in the opinion of Earl D. Keefer, of Miami, Fla., widely known as an expert in hotel property appraisals.

He is southeastern regional vice president of the American Institute of Real Estate Appraisers and also 1951 president of the Florida Association of Realtors.

Keefer, told a recent meeting of the Atlanta chapter of the Institute of Real Estate Appraisers, "Air conditioning is a complete 'must' in a modern hotel. Installation of air conditioning usually costs 'nothing.'

"The increased revenue following this installation soon pays for and exceeds the cost. I know of one hotel which had put in air conditioning, increased its room rates, yet was invariably full while a non-air conditioned hotel across the street had many rooms that went begging."

EEI Sales Conference Set For April 2-5 In Chicago

NEW YORK CITY—The 17th annual sales conference of the Edison Electric Institute will be held on April 2-5 at the Edgewater Beach hotel, Chicago, it has been announced by Merrill E. Skinner, chairman of the EEI Commercial Division General Committee.

National leaders in the electric utility sales and appliance fields will address the general sessions, scheduled to convene on Wednesday, April 4. The sales outlook for the coming year in the residential, farm, commercial, and industrial markets will be discussed by industry leaders at four concurrent sectional meetings on Tuesday, April 3. A full-day session on home service will be held April 2.

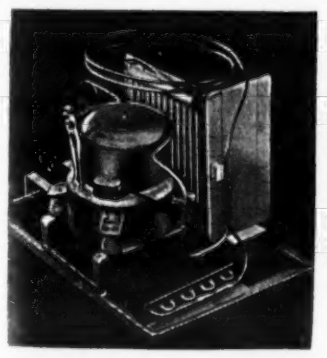
On April 4, the awards which are offered to electric operating companies annually, and sponsored by EEI for outstanding promotional accomplishments will be presented.

The conference will be concluded April 5 with a luncheon session.

TAKE ADVANTAGE of DEVALUATION

L·E·C **REFRIGERATOR SEALED UNITS** ALL VOLTAGES

THE LECOMETIC



THE BEST

Now available for the trade at keen prices either with body and starting relay only or complete, ready for immediate installation as depicted above, the "LECOMETIC" suitable for ambient temperatures up to 110° F.

We can also offer standard open type condensing units. Also the "BOLCO" absorption unit operated on parafin or gas.

ARN SALES DEPT. Telegram: Longworks Bognor

L·E·C

Telephone Bognor Regis 2201 1.0 Lines

BOGNOR REGIS ENGLAND

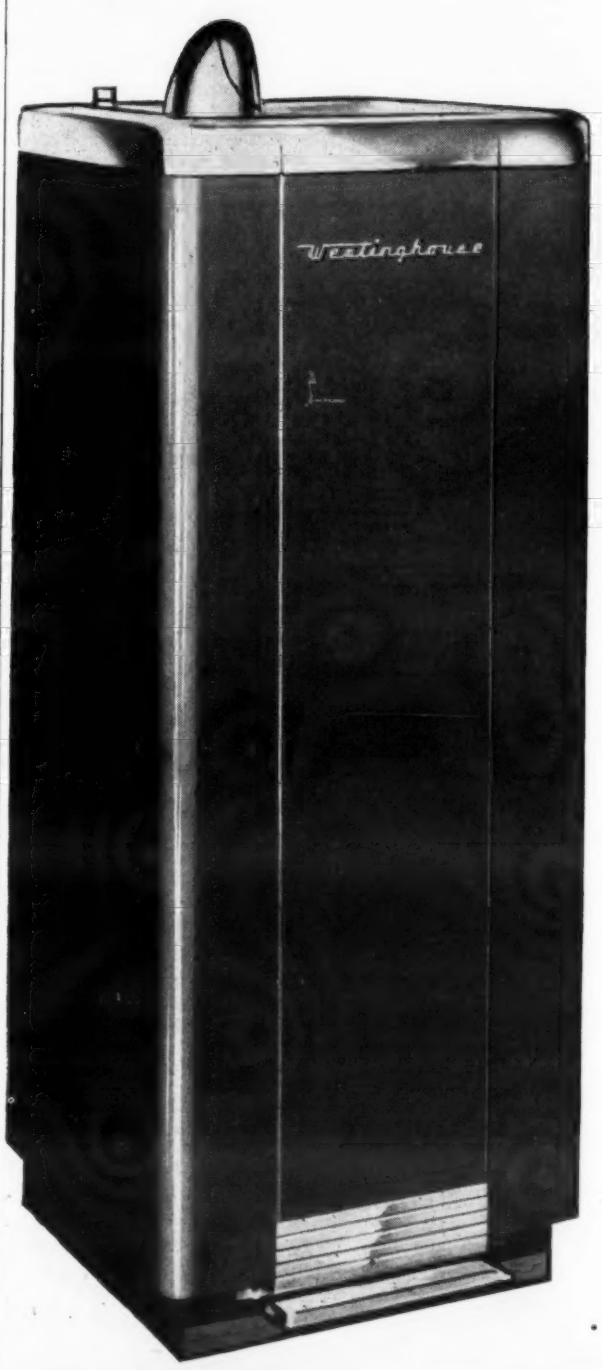
SALES MANAGER WANTED

Man Commercial Refrigerator experience preferred. Good salary, plus automobile, traveling expenses and bonus. Write application yourself in pen and ink fully explaining experience, nationality, family, past jobs, references, age.

ED FRIEDRICH SALES CORPORATION
P.O. Box 1540
San Antonio, Texas

Don't Gamble... Sell Westinghouse!

IT'S THE BLUE CHIP LINE OF THE INDUSTRY



With the Westinghouse *Foot-Pedal Control* no frustration by situations like this. No hands . . . just step on the pedal.

With the Westinghouse *Stainless Steel Top* there's no breakage problem. It's sanitary . . . easy to clean . . . and beautiful.

With the Westinghouse *Stream-Height Regulator* this can't happen . . . always a drink, never a squirt or dribble.

PLENTY OF BLUE CHIP FEATURES

Features that your customers like . . . features that sell. The Westinghouse Automatic Stream-Height Control holds the water flow constant regardless of variations in water pressure . . . a standard feature on all Westinghouse Pressure Coolers that helps you *sell.* Always a cool, refreshing drink, never a dribble or a squirt in the eye. In addition, they like the Stainless Steel Top, the convenient Foot-Pedal Control, the compact design . . . only 14 inch by 14 inch floor space required . . . and the smartly styled appearance. *Westinghouse and only Westinghouse has them all.*

So, it's sell Westinghouse! Sell the leader! Ten models available including heavy-duty, air-cooled, water-cooled and explosion-proof coolers for defense plants, munition plants, oil refineries, etc. Westinghouse has always been a leader in sales to industry. In the months ahead, sell the cooler that already has high acceptance from Government and industry.

WESTINGHOUSE ELECTRIC CORPORATION
Electric Appliance Division **Springfield 2, Mass.**

. . . of course, it's Electric

YOU CAN BE SURE...IF IT'S Westinghouse

For further information call your Westinghouse Distributor or mail the coupon below:

Name_____

Street_____

City_____ State_____

Refrigeration Equipment, Appliances Hit by Ban on Use of Nickel Steel, Nickel Alloys

WASHINGTON, D. C. — Refrigerated food display cases, freezers, water coolers, soda fountains, ice cream cabinets, bar and dairy equipment, and domestic appliances are among the nearly 400 civilian products covered by the National Production Authority's recent ban on the use of nickel.

The agency prohibited the use of nickel silver or nickel plate in a wide range of items beginning March 1. It also listed a great many other items in which nickel-bearing stainless steel or high-content nickel alloys may not be used starting April 1.

The order gives manufacturers a period of two months in which to complete articles started before the effective date of the regulation.

Among the products in which nickel-bearing steel is not to be used on or after April 1 are:

Domestic appliances — cabinets; sheathing of freezer units; range tops; refrigerator shelves, trim, and dishes; and washing machine tubs.

General—automatic vending machines, bar equipment, soda fountains, and water coolers. Miscellaneous—dairy equipment (except functional uses) and humidifiers.

High-content nickel alloys may not be used in these products, among many others:

Food servicing and kitchen equipment—freezer cabinets, dishwashing machines, ice cream cabinets, refrigerated food display cases, soda fountains, and water coolers.

Several industry products are also affected by the ban on use of the other forms of nickel noted.

MORE INFORMATION?
Use Handy Coupon on "What's New" Page of this issue

California Dealer Bids for Appliance Service Business In 'Annual Report to Housewives' Outlining Store Policy

BAKERSFIELD, Calif.—In "Urner's Annual Report to Housewives," the local retail appliance firm announced that it handled a total of 10,565 service jobs for consumers in 1950 and pledged "continuance of this service, with improvements wherever possible, during the critical years ahead."

The "true account of appliance service performed for you housewives during the past year" was presented in two half-page advertisements published in succeeding issues of *The Bakersfield Californian.*

Both advertisements contained a box headed "1950 Service Summary." Copy here stated that the concern made 4,581 home calls to service large appliances and completed 5,984 shop jobs on both large and small appliances.

Both advertisements also noted that the company is now in its 32nd year and that its Appliance Center at 212 Twenty-first (pictured in the advertisements) is the authorized service station for Proctor and General Mills appliances. The firm also operates a downtown store at 2006 Chester Ave.

Main copy in the first advertisement said, in part:

"Have you ever stopped to think how highly mechanized your homes are becoming? Just for fun sometime count the electrical devices you are using to aid you in your own housekeeping.

HOMES DEPEND ON APPLIANCES

"At breakfast, say, you may depend upon your pop-up toaster, your electric coffeemaker, egg cooker, your mixer or waffler. And, that's just the beginning . . . as the day progresses tally the number of times you depend upon some electrical appliance to perform a household task.

"Your laundry may be 100% mechanized with a wholly automatic washer, an automatic clothes drier, and a modern ironer. . . .

"The whole problem of food preparation and preservation has been revolutionized with such things as the home freezer, two-zone refrigerator and automatic cooking equipment. . . .

"Urner's with over 31 years' experience in the home appliance field, long realized the importance of maintaining an adequate and efficient service organization. And when we built our big Appliance Center in 1945, over half of the space in the huge building was assigned to parts and service.

SERVICE DEPARTMENT IS BIGGEST EVER

"Today these quarters are taxed to capacity and we are operating the largest and most expert appliance service organization in our history!

"We take pride in completing a grand total of 10,565 service jobs for you during 1950 . . . we pledge continuance of this service, with improvements wherever possible, during the critical years ahead!"

A note advised readers to "see our advertisement in tomorrow's *Californian* for further service information of special interest to housewives."

Copy in the upper portion of the second advertisement said, "Urner's suggests when buying home appliances it's wise to inquire about the service." Copy continued:

"Have you ever been told, when shopping for an appliance . . . 'this "blah-blah" make is built so well it will never need any service'? That remark generally means just one thing . . . the 'blah-blah' make and the 'ho-ho' dealer are not prepared to give you parts and service when a breakdown occurs.

"There is not a famous-name appliance on today's market that is not backed up with parts, service manuals and bulletins; and, generally, field servicemen to train the dealers' servicemen.

"In the automobile business the necessity to carry parts and employ trained service personnel is a vital part of the dealer's franchise. While this isn't required in the appliance business, we, at Urner's, have accepted this policy as a firm obligation.

WE STOCK NEEDED PARTS

"In the first place, we will not handle any make not properly organized to supply us with parts and service information; and in the second place, we *stock* the parts and see that our servicemen get specialized training on each make that we carry.

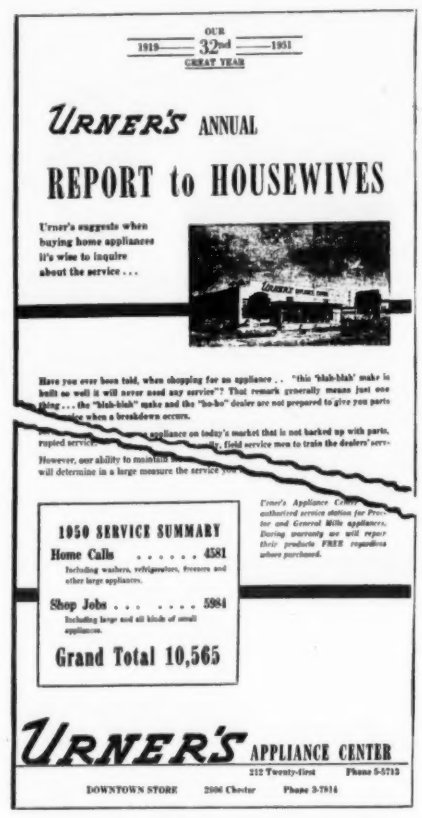
"In parts, servicing, and delivery Urner's employs 19 men; two work exclusively in the parts department where over 900 sq. ft. of floor space is inadequate to handle our supply of parts now in excess of $25,000 in value.

"In our service department we believe in specialization . . . thus some work exclusively on automatic washers, other specialize in refrigerator repair, conventional washers, etc.

"Two men are kept busy repairing small appliances . . . one man specializes in repairing washing machine wringers. A total of seven trucks is used for service work and deliveries.

"These are uncertain times . . . but there is no uncertainty about our plans to maintain our appliance service! Even though we lost our entire service personnel to the armed forces during World War II, we replaced them with older men and carried on uninterrupted service.

"However, our ability to maintain service is dependent upon parts. What you buy today will determine in a large measure the service you may get tomorrow."


OUR
1919 — 32nd — 1951
GREAT YEAR
URNER'S ANNUAL
REPORT to HOUSEWIVES
Urner's suggests when buying home appliances it's wise to inquire about the service . . .
1950 SERVICE SUMMARY
Home Calls 4581
Including washers, refrigerators, freezers and other large appliances.
Shop Jobs 5984
Including large and all kinds of small appliances.
Grand Total 10,565
URNER'S APPLIANCE CENTER
212 Twenty-first Phone 5-5713
DOWNTOWN STORE 2006 Chester Phone 3-7914

STRESSING SERVICE: Urner's campaign impressed on housewives that he provides the service to back the appliances they buy.

SERVICE IS OPPORTUNITY

Commenting on the advertisements, D. E. Urner said:

"We are convinced that adequate service is of increasing importance in this business. In our own business we no longer consider service as a 'necessary evil' or 'just a headache,' but as an opportunity to build a sound and lasting business.

"With as many families, as our records show, depending upon us for service, we should never want for sales, providing the service is adequate and fair."

Feinberg Will Represent Dean

BROOKLYN — Walter Raskin, president of Dean Products, Inc., here, manufacturer of cold plates, has announced the appointment of Emanuel Feinberg as company sales representative covering eastern Michigan and western Ohio.

Refrigeration Dealer Eliminates Motor Burnouts with Klixon Protectors

GLENS FALLS, N. Y.: Roy J. Pouliott, Service Manager of Finch, Pruyn & Company, important New York State dealer in building supplies, fuel and refrigeration, goes all-out in attesting the *saving safety* of Klixon Protectors.

"As the largest commercial and domestic refrigeration people in northern New York State, we have had ample opportunity to observe the worth of Klixon Protectors. We find that they eliminate burnouts in motor and solenoid windings. This not only simplifies our service work, but also results in greater customer satisfaction."

Klixon Protectors Reduce Service Calls and Repairs by Preventing Motor Burnouts

The Klixon Protectors illustrated are built into the motor by the motor manufacturer. In such equipment as refrigerators, oil burners, washing machines, etc., they keep motors working by preventing burnouts. If you would like increased customer-preference, reduced service calls and minimized repairs and replacements, it will pay you well to request appliances that have Klixon-Protected motors.

KLIXON

SPENCER THERMOSTAT
Division of Metals & Controls Corp.
2402 FOREST ST., ATTLEBORO, MASS.

Savings Club Plan

Customers Use Bank To Accumulate Down Payment While Store Tags, Holds Appliances They Select

BUFFALO — Urging prospective customers to forget worries about down payments, rumors of shortages, and fears of substitutes, Schwegler Bros. appliance store announced a new "Savings Club Plan" to make it easier for customers to buy appliances under Regulation W.

Under the plan, customers save up the down payment on any appliance in small, regular amounts, making it less difficult to meet the initial outlay.

To facilitate such a plan, Schwegler Bros. provides these customers with an all-metal bank to help them accumulate the regular payments. The bank is given to the customer as soon as the purchase is made.

Here are steps in the plan as outlined by Schwegler's:

"1. You select any appliance in our store and we'll put a 'sold' tag on it immediately. Orders will be taken only for merchandise in stock. No matter how hard to get things may become, you will get that appliance without substitution.

"2. You begin to make small, regular payments—saving up the down payment. These payments are exactly the same as you'd make if you had the down payment in cash.

"3. As soon as you've completed the down payment, we'll deliver your appliance. You pay the balance simply by continuing your weekly or monthly instalments for the period specified in the government's credit regulations."

You'll be contented, too...

with Ranco MILK COOLER REPLACEMENTS

You'll spend far less time on the job, save shopping all over town for the right control, and make greater profits —when you replace it right with a Ranco Milk Cooler Replacement. Visit your Ranco wholesaler and select from the most complete line ever supplied to the trade!

RANCO REPLACEMENT REFERENCE No. 1244

. . . includes alphabetical listing of all refrigeration manufacturers, trade names, and the Ranco Replacement Control code number. *Copies available only through Ranco wholesalers.*

Ranco Inc.
COLUMBUS 1, OHIO

RANCO CONTROLS

WORLD'S LARGEST MANUFACTURERS OF REFRIGERATION CONTROLS

FLOWER RACKS are hinged in the middle to allow driver easy access to the flowers at the rear.

COMPRESSOR is mounted on steel straps just forward of the right rear wheel. A 110-volt plug-in is provided.

* * *

Refrigerated Florist Truck

It Delivers Fresher Flowers, Offers Overnight Storage, And Builds Goodwill, California Flower Shop Discovers

LOS ANGELES—What is said to be the first refrigerated truck operated by a retail florist in southern California has been built for Inglewood Park Flower Shop.

Among other things, the vehicle enables the shop to deliver flowers in top condition to points several miles distant despite California's high temperatures. Also, it provides the firm with an additional refrigerator at night.

The ¾-ton Ford truck is the result of the cooperative efforts of the flower shop, Sutton Ford Co. of Inglewood, Standard Carriage Works of Los Angeles, Authorized Supply Co., and Parsons Refrigeration Co. of Los Angeles.

Body of the truck is 8 ft. long and 6 ft. 4 in. wide, with a door opening of 54 in. and an inside width of 68 in.

Considerable Work Done On Body

Standard Carriage Works did quite a bit of work on the body. The all-steel framework was covered with 20-gauge auto body steel. The inside lining is ¼-in. plywood covered with 26-gauge galvanized steel. Four inches of fiberglass of 2-lb. density was installed in the sides, front, doors, ceiling, and floor.

The floor is made up of ⅞-in. tongue and groove oak, covered with 20-gauge galvanized steel sheet. Under the floor cross members is 26-gauge galvanized steel sheet.

Two Dole 24-in. by 48-in. by 2⅝-in. plates are mounted in the ceiling. Under the plates a pan of 26-gauge galvanized steel was installed, with a ⅜-in. thickness of plywood underneath the pan. Beneath the plywood and the pan is a 1-in. thickness of fiberglass. The drip pan has a 1-in. taper to the front so any condensation runs to the front and down and out a drain hole in the bottom.

Of importance to the truck driver and delivery man are the racks which hold the flowers. In this truck they are made of 1 by 1 by 10-gauge galvanized mesh wire. There are three of them and they have a 1-in. steel channel frame to slide on.

Shelves Hinged In Middle To Aid Unloading

All three shelves are hinged in the middle (from front-to-back direction) so when the florist loads or unloads flowers that are on the back of the shelf, he just pulls it out and lowers the front end. This makes the flowers in the rear easily accessible.

The compressor is a ½-hp. Brunner unit mounted on steel straps just forward of the right rear wheel. A 110-volt plug in makes it easy to hook up the compressor when necessary.

"Freon-12" is used in this compact system. The tubing runs from the compressor up the front wall of the truck to the two Dole plates in the ceiling.

A thermostat could not be installed, of course, so circulation of the cold air and maintenance of temperature is controlled by adjusting the hinged sides of the plywood sheeting installed below the drip pan. These panels are manually controlled by ropes from the rear.

A thermometer on the right rear wall near the door indicates the temperature. If the temperature gets too low the hinged panels are raised, cutting off the flow of cold air from the unit in the ceiling. If the temperature is too high, the panels are lowered.

110-Volt Line Used During Night

Inglewood Park Flower Shop keeps the temperature between 48 and 50° F. At night, a 110-volt line is plugged into the compressor to have the temperature down in the morning. For convenience an external 110-volt line was installed in the building so there is no dragging around of wire and plugging in double sockets.

Jack Savarese, manager of the flower shop, said the truck is almost as necessary for his business as flowers. Since much of the shop's business requires delivery of flowers 30 and 40 miles away, and since the temperature in California is over 70° F. seven months of the year, and often over 90°, the need for the refrigerated truck is obvious.

Savarese feels the truck will pay for itself in a short time. First, it gives the shop an extra refrigerator at night. Second, it keeps the flowers "ice box fresh" until delivered, which patrons like.

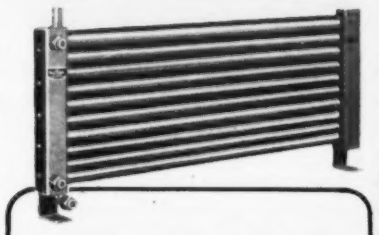
Further, having the extra storage space at night, the shop is able to make up many orders the night before with regular help and store them in the truck, instead of having to hire extra help for a heavy morning order.

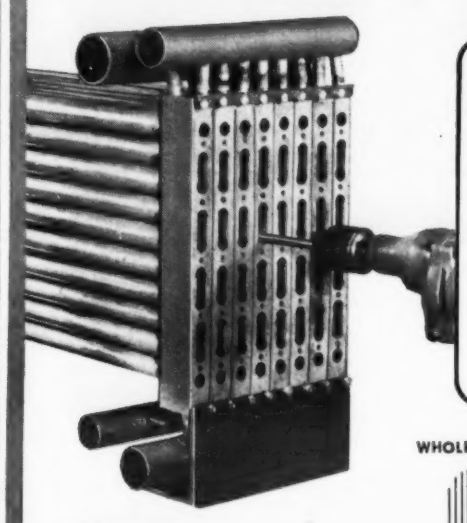
The truck also is a goodwill builder. On a recent night, one of the major airlines called Savarese and asked if it could put several boxes of flowers in his refrigerator as the one at the airport had broken down.

Normally, Savarese would have had to say no due to his own refrigerators being full, but now he was able to say "Sure, bring them over!" When the airlines man arrived and saw the refrigerated truck, he exclaimed: "Say, we are going to have to have a plane equipped like this!"

More Efficient—CLEANABLE
CONDENSERS

HM WATER-COOLED DOUBLE-TUBE COUNTER-FLOW DESIGN





Acceptance in the field is rapidly changing to "Demand" for these efficient, more economical Cleanable water-cooled Condensers. Owners and service men prefer the "new unit" efficiency that can always be maintained by a simple cleaning process. Brass headers are machined and brazed.

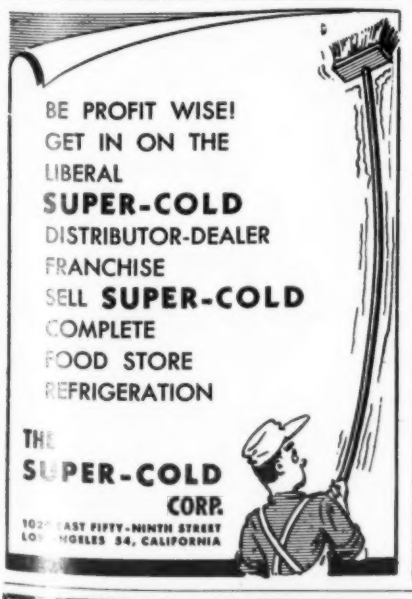
Write for Catalog and Prices.

½-TON to 25-TON CAPACITIES

WHOLESALERS IN PRINCIPAL CITIES

HM Halstead & Mitchell

BESSEMER BUILDING • PITTSBURGH 22, PA.



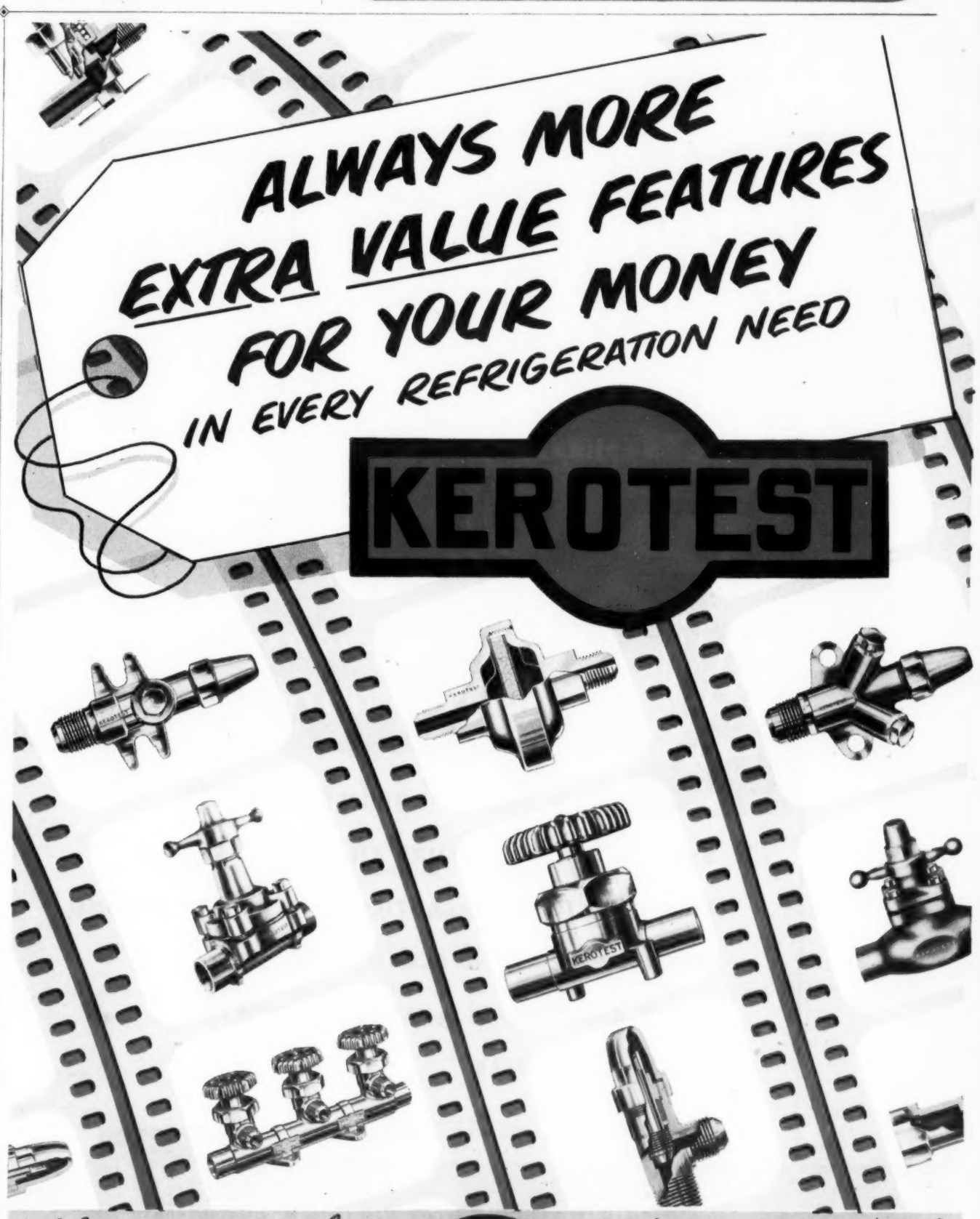
BE PROFIT WISE!
GET IN ON THE
LIBERAL
SUPER-COLD
DISTRIBUTOR-DEALER
FRANCHISE
SELL SUPER-COLD
COMPLETE
FOOD STORE
REFRIGERATION

THE SUPER-COLD CORP.
1020 EAST FIFTY-NINTH STREET
LOS ANGELES 54, CALIFORNIA

Refrigeration Units WANTED

Desire to purchase ⅛ to 1-HP Sealed or open type; standard brands; Complete condensing units; Also parts; Give full details.

HARWOODE EXPORT CO.
31 E. 4 Street, New York 3, N. Y.



Always greater value at no extra cost!

SEE YOUR KEROTEST WHOLESALER

KEROTEST MANUFACTURING CO. PITTSBURGH 22, PENNSYLVANIA

What's the Best Temperature for Self-Serve Open Display Cases?

Too Close to the Forest To See the Trees!

" . . . a case of being so close to the forest that you can't see the trees."

That's the position in which D. C. McCoy of Frigidaire believes some producers, distributors, and users of open self-service cases find themselves today with respect to the all-important basic problem—what is the best temperature to maintain in those fixtures?

When McCoy, who has spent a lifetime studying such refrigeration problems, called our attention to an error in quoting brief comments he made on this subject, he was invited to amplify his remarks.

The subject is too important to be ignored or passed over lightly by anyone in the refrigeration industry who's concerned with preservation of perishable foods, and that covers just about everyone. McCoy's analysis, then, will prove extremely valuable to the commercial manufacturer, distributor, salesman, installer, serviceman, and their customers—the users.

35° Recommended as Most Practical by McCoy of Frigidaire

Frigidaire Division
General Motors Corp.
Dayton 1, Ohio.

Editor:

In the Dec. 25 issue of the NEWS, I find the report on Nelson Allen's talk at the New York ASRE meeting including my comments thereon. The following statement credited to me appears: "After meat has been packaged, it should go into a cooler held at 30° to 35° F."

I regret to say that the 30° statement was not a part of my comments. The 30° situation is one of the things which is giving the refrigeration industry and fixture users some of the headaches which they have today with the open-type display cases. It brings into being the problem of critical control and others upon which I commented.

The short space of time available before I delivered by comments did not allow me to prepare them in writing as is my usual custom. My comments were turned over to the chairman of the session as rough pencil notes after I delivered them. Since my handwriting is none too good and the notes were very rough, I can readily understand how they might be misinterpreted.

My comments at the New York meeting were necessarily very brief. I had no time to expand them to fully explain some of the points I made. Consequently, I am doing so in this letter, as a service to the industry and your readers.

Regarding the matter of quality food, wherever the sellers of pre-packaged meats or other perishables have been giving the public quality merchandise, the idea of self-service pre-packaged perishable foods has taken hold and met with excellent consumer acceptance. A direct parallel can be drawn between the old cracker barrel and the present-day packaging of crackers. Packaged crackers have been acceptable to the consumer for years because they are quality merchandise backed by brand names.

Regarding proper packaging, my investigations show an excellent job of protecting the food is being done by the use of proper types of films. Du Pont, Sylvania, Goodyear, and others supplying this type of film have done an excellent job of educating users and supplying the proper types of materials. I have not experienced a single instance where difficulties could be traced back to the use of improper packaging materials.

What confusion may exist insofar as the packaging is concerned, lies in differences of opinion as to more effective ways to display the merchandise, make it look more attractive, or make it more convenient to handle. There has occasionally been some improper application of good materials.

Regarding display, different operators have their own ideas as to how they want to display their merchandise. Uniformity is lacking along these lines. Insofar as the open-type display fixtures are concerned, the majority I have seen present the packaged merchandise to the public in a very good manner. What conflict of ideas exists along these lines again comes down to differences in individual opinions as to merchandising and display details, rather than violation of fundamentals.

GOOD REFRIGERATION ESSENTIAL

Regarding refrigeration, the successful use of self-service, pre-packaged, perishable merchandise *requires good refrigeration from the time the food enters the store until it is delivered into the customer's hands.* There has been too much striving for the ideal rather than trying to arrive at a commercially practical operating compromise. The refrigeration has at times been a source of service difficulty and expense to suppliers of the equipment and to users of the equipment.

Today's situation with regard to open-type refrigerated display equipment parallels the situation 20 years ago when mechanical refrigeration was first applied to the closed-type display case. History is repeating itself. The fundamentals causing difficulties then experienced were:

1. Attempts to carry cases at too low temperatures.

2. Improper use of equipment by store personnel.

The present situation involves these same fundamentals, but varies in some details.

From the standpoint of pure food technology, handling meat at 28° to 30° would be ideal. However, this is where the ideal technical knowledge must be compromised to a practical level to meet commercial operating conditions.

Just recently, a copy of an advertisement showing open meat display fixtures at 24° F. temperature, was called to my attention. This shows lack of or disregard for knowledge of the food technology of meat and of practical operating considerations. Meats freeze between 28° and 30° F. (ASRE Data Book, 1946 Edition, Page 46, Figure 1, and Chapter 12, Page 125, Table 1). Some variation occurs with all foodstuffs, as composition is not uniform.

DIFFICULTIES EXPERIENCED

Attempts are being made today to carry cases for the merchandising of pre-packaged, self-service meats at 28° to 30°. When such temperatures are produced, difficulties are often experienced with the bottom layers of meats freezing. Other practical operating problems also result. The advertisement does not indicate that the case is intended for frozen meat—but assuming it is, 24° F. is not the proper temperature for handling frozen meats.

Since meats freeze at 28° to 30° F., and since practical commercial tolerances for automatically controlled equipment is about plus or minus 2° F., such temperatures involve critical control to keep part of the product from freezing.

Perishable food is brought into a retail store *to turn over rapidly at a profit and not to store for long periods of time* as in a storage warehouse. Optimum storage temperatures, and storage warehouse practice are being confused with practical operating technique for the retail store.

Years of observation of refrigeration requirements in the retail store indicate that perishables are usually turned over within 48 to 72 hours at the retail level. This turnover will permit the safe handling of the perishables at higher temperatures than are optimum or are required for

(Concluded on next page)

Standard and Custom-Built

REFRIGERATOR HARDWARE

by

National Lock Company

● SURFACE
● "THRU-THE-DOOR"
● EDGE-MOUNTED TYPES

also standard and custom-built

STAMPINGS ● PRESSURE ZINC DIE CASTINGS
PLASTICS, THERMOPLASTICS and THERMO SETTING
SHELF SUPPORTS ● SCREWS AND BOLTS
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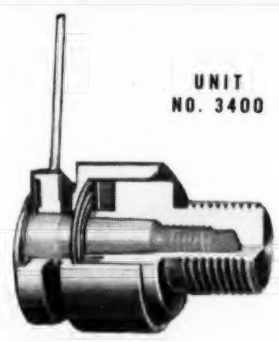
HANDLES ● PULLS

WRITE US FOR FULL INFORMATION AND DESIGN DETAILS

NATIONAL LOCK COMPANY
REFRIGERATOR HARDWARE DIVISION
ROCKFORD, ILLINOIS

ROTARY SEAL REPLACEMENT UNITS

UNIT NO. 3400



MORE THAN 900 MODELS

AT ALL LEADING JOBBERS

are available in a complete range of sizes—including the larger models for use in Commercial and Semi-Commercial Compressors, such as:

BAKER • BRUNNER • CARRIER • CURTIS • COPELAND • FRIGIDAIRE • KELVINATOR • GENERAL ELECTRIC • MILLS • PAR • UNIVERSAL COOLER • WESTINGHOUSE and others

THE ROTARY SEAL COMPANY — mechanical seals for rotating shafts

"Seal with Certainty!"

2020 NORTH LARRABEE STREET
CHICAGO 14, ILLINOIS, U. S. A.
CANADIAN AGENT: 2025 ADDINGTON AVENUE
MONTREAL 28, QUEBEC, CANADA

Proper Design Must Be Augmented with Education of User To Improve Conditions

(Concluded from preceding page)

long-time storage in the warehouse. *Experience has shown that practical commercial operation can be achieved with the higher temperatures.*

Note also J. R. Caulk, Jr.'s comments on Allen's paper, "The prevention of hazard—is to keep the meat below 38° F. at all times." Caulk's statement checks with my experience and emphasizes my comments on Allen's paper.

As to the refrigeration equipment itself, the 28° to 30° F. temperature leads to certain operating difficulties, repeating experiences with the closed cases some 20 years ago. When mechanical equipment was first applied to cases, the idea was prevalent that it was necessary to carry 32° F.

RETAIL REQUIREMENTS

Packing house practice was confused with practical retail conditions which were not yet determined. Cases were being sold at that time as "freezer cases" with the idea that they would hold temperatures at or close to the freezing point of water. Since water freezes at 32° F., it is extracted from the atmosphere and food in the case and deposited as frost and ice on the cooling coils.

This fundamental is responsible for operating difficulties experienced both 20 years ago and today. If steady temperatures within the accepted commercial tolerances of plus or minus 2° are to be maintained, it is necessary that the cooling units furnishing the refrigeration in the refrigerated space be kept clear of frost, or that suitable cooling unit surface be installed to offset the frost formation.

The defrosting of cooling units 20 years ago was first done manually and was the responsibility of the butcher or store operator. It did not receive the attention required. Hence, the so-called "freezer case" was not long a freezer case. As more frost gathered on the cooling units, temperatures in cases rose and food spoilage resulted.

The remedy of putting large cooling unit surface into a display case eliminates itself. *Display cases are made with the primary purpose of displaying merchandise and selling it.* The limitations imposed upon design by maintaining good display decidedly limit the coil surface which can be put into display cases. Refrigeration results are therefore compromised.

In order to produce the B.t.u./hr. refrigeration capacity required to maintain temperatures in cases with small coil surface permitted by physical limitations, case refrigeration systems are of necessity operated at lower refrigerant temperatures than some other types of fixtures when space permits adequate coiling. *This further aggravates the problem of frost collection on the cooling coils.*

The refrigerated display case was a source of much difficulty in the retail store 20 years ago until methods of automatically defrosting the cooling units were devised, relieving the store operator of this responsibility, which few of them ever accepted. A practical operating compromise insofar as case temperatures was also established.

Case temperatures between 34° and 55° F. (depending upon the type of case and the food being handled) were finally agreed upon and set up as standard by the Commercial Refrigerator Manufacturers Association (see ASRE 1946 Data Book, Page 332). This brought order out of the chaos, and suitable preservation of perishables at the retail level resulted. The same thing needs to be done today.

SAME PROBLEM WITH CLOSED CASES 20 YEARS AGO

Regarding the education of store personnel to properly use fixtures, the same fundamental problem, varying only in detail, was encountered with closed-type display cases 20 years ago. The "why" of this situation is as follows:

In order to refrigerate this type of fixture, it is necessary that the air circulate through the fixture, through perishables being handled, and back over the cooling units. Twenty years ago butchers insisted on placing paper over the grids on the shelves of refrigerated display cases, cutting off air circulation.

Displays were stocked in such a manner that the air could not circulate through the case, or through the perishables, resulting in high temperatures and food spoilage. Until operators of these cases were educated to handle their fixtures so that the air could circulate, difficulties continued.

The present type open display cases are again being stocked so that circulation in some of them is cut off, resulting in high temperatures and deterioration of the perishable foods. Many instances of products being stocked completely out of the zone of refrigeration have been observed. Such products might just as well have been set out on the floor of the store as to be placed where they were in the display case. User education is again required in properly stocking the open-type display case with perishables to obtain the best refrigeration results.

CUSTOMERS ARE PROBLEM

Going back 20 years again, the responsibility was entirely in the hands and under the full control of the operator of the case. Today, with the open-type, self-service display case, customers disturb the contents of the case. Today, it is necessary that continuous supervision be applied on the part of the store operator to offset this condition. In addition, he must do his own stocking properly to keep the perishables under proper refrigeration, being sure they do not block circulation and that they are in the zone of refrigeration.

Improper loading of cases so that air circulation is interfered with also affects defrosting of the cooling units. Above 32° F. must be provided to defrost coils. If the cooling units are to be defrosted by heat carried to them with the circulated air, this air temperature must get above 32° F. to transfer heat and defrost the coils.

It should, therefore, be obvious that carrying cases at 32° F. which was attempted 20 years ago and 28° to 30° F. which is now being attempted, defeats itself first from the standpoint of defrosting the coils, and second from the standpoint of trying to carry these temperatures if the coils are not kept clean. This point is so elementary that it has apparently been completely overlooked—a case of being so close to the forest that you can't see the trees.

QUESTION OF DEFROSTING

If defrosting is to be accomplished by circulating air, fixture temperatures at times must rise above 32° F. An alternate is some other means of removing the frost accumulation from the coils than by circulating air. *Some means of POSITIVE defrosting of cooling units must be a part of the case and its refrigeration system.*

The fundamentals of many methods have been very thoroughly covered in an article by Israel Kramer, Page 21, July, 1945 issue of *Refrigerating Engineering*. Some of these systems of positive defrosting are not adaptable or practical for display cases.

Positive methods of defrosting for fixture temperatures below 35° F., particularly when automatically controlled, involve a substantial increase in the cost of the refrigerating system to the user. They also complicate servicing the system. Attempts to apply some of these systems have overlooked fundamentals, resulting in failures and service difficulties in the field.

The problem of dehydration of fresh meats was a serious one with early mechanically refrigerated display cases. In walk-in coolers and some other types of fixtures, this can be cared for to a point of practical commercial satisfaction by the use of sufficient cooling unit surface which can usually be readily installed. In the display case, physical limitations usually make it impossible to meet this situation this way. A certain amount of dehydration must be accepted as an operating problem and must be partially offset by relatively rapid turnover of the product.

Very fortunately, dehydration is not as serious a problem with pre-packaged fresh meats in the open-type display cases, as proper packaging reduces the tendency to dehydrate. However, the benefits so gained are offset by more difficulties due to effects of light on the meats. So that, again, relatively fast turnover becomes a practical operating necessity.

There is a definite need for revision of the whole technique compromising the theoretical with the practical. Years of experience with refrigeration of meat in retail stores indicate compromise by carrying higher temperatures as suggested in my comments at New York, and amplified above. This should solve some of the present problems and give better user satisfaction and less service problems. Suggestions for solution of others were made in the concluding sentences of my comments at the New York meeting and need no further amplification at this time.

D. C. McCoy,
General Sales

LOOK TWICE!

COMPARE

Then promote and sell STERLING Profit Maker Open Self-Service Display!

Your food market customers compare, you know. That's why they're quick to recognize the merits of the STERLING Profit Maker, with famous "Perfectionaire" Cooling System and mirrored super-structure. Comparison proves the Profit Maker, with its low operating cost, is the best Dairy Case on the market today!

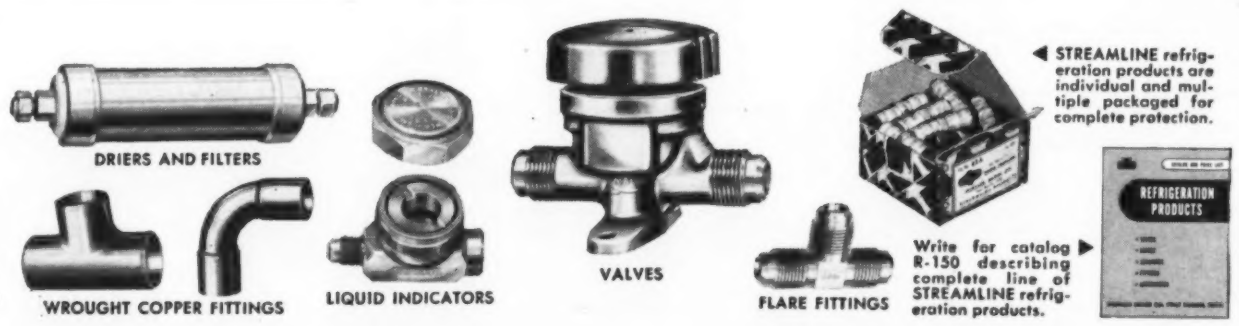
WRITE FOR COMPLETE CATALOG

MINNEAPOLIS SHOW CASE AND FIXTURE COMPANY • New Richmond, Wisconsin

IT PAYS to climb on the MUELLER BRASS CO. band wagon for . . .

- A full and complete quality line of protectively packaged refrigeration driers, valves, fittings and accessories — stocked and sold by your refrigeration wholesaler.
- Complete manufacturing facilities — from raw material to delivered product — under the strict control of Mueller Brass Co. craftsmen, technicians and engineers.
- A large, well-trained force of sales and field engineers to coordinate the laboratory and manufacturing facilities of the Mueller Brass Co. with your needs.

51


DRIERS AND FILTERS
WROUGHT COPPER FITTINGS
LIQUID INDICATORS
VALVES
FLARE FITTINGS
STREAMLINE refrigeration products are individual and multiple packaged for complete protection.
Write for catalog R-150 describing complete line of STREAMLINE refrigeration products.
REFRIGERATION PRODUCTS

MUELLER BRASS CO., PORT HURON 10, MICHIGAN

They'll Do It Every Time . . . . By Jimmy Hatlo

HEY!! ALL MY PHONE NUMBERS! GONE! OFF THE WALL! THAT ☆◎#!! PORTER!! ☆#◎!!ᵌ!!☆
DAPPER MIGHT AS WELL GO OUT OF BUSINESS··· IT TOOK YEARS FOR HIM TO ACCUMULATE THAT PLASTER FILING SYSTEM···
I'M NOT AS SORRY FOR DAP AS I AM FOR THE POOR BOOKIES WHO ARE PINING AWAY, WAITING FOR HIM TO CALL···
I WISH SOMEBODY'D CLEAN OFF THE TOP OF HIS DESK··· MAYBE WE'D FIND THE STONE OF SCONE··
HE HAD SOME GALS' PHONE NUMBERS ON THERE SO LONG THEY'RE GRANDMOTHERS NOW···
1-15
JIMMY HATLO
THERE'S ONE OF THESE SLOPPY JOES IN EVERY OFFICE···· ALL OVER THE JOINT····
THANX TO MAX APPEL, 85 WASHINGTON ST., E. ORANGE, N.J.
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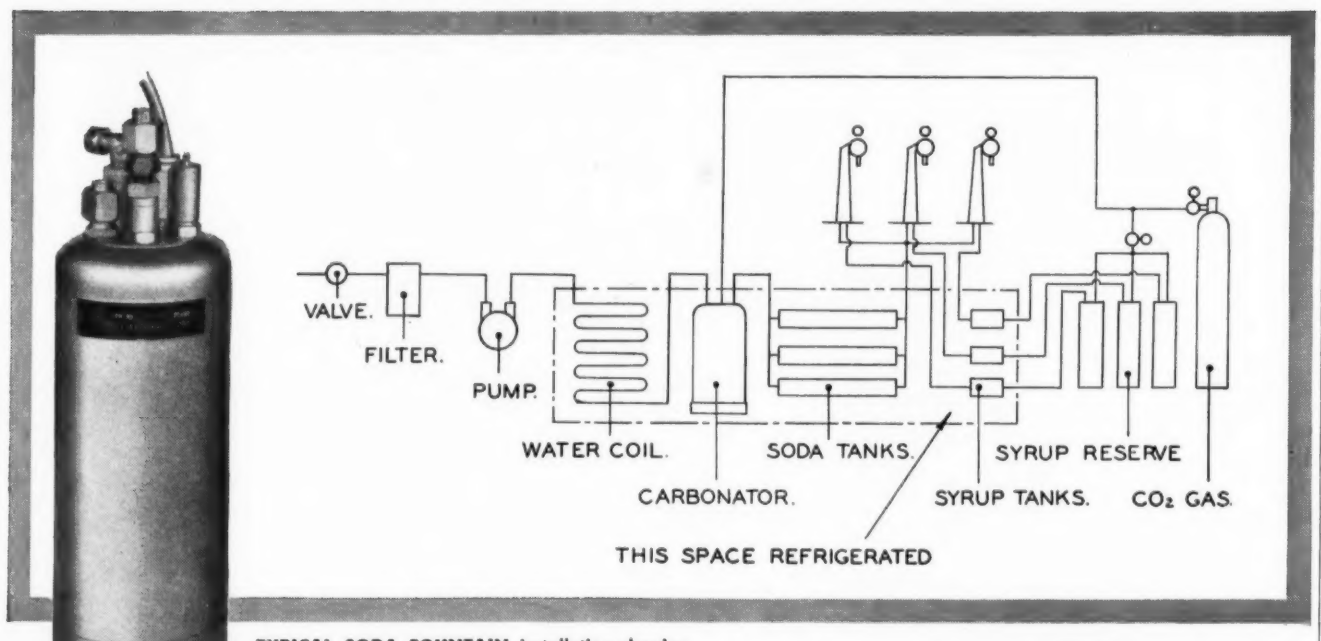
Do You Have 'Both Feet On The Ground'?

Highly versatile Temprite Carbonators adaptable to all types of installations



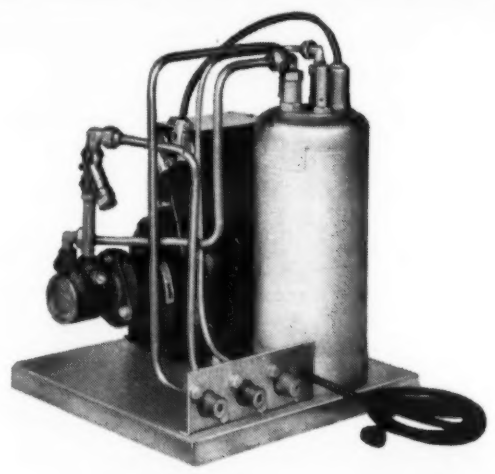
TYPICAL SODA FOUNTAIN installation showing the Temprite Carbonator located within the refrigerated compartment, with the pump assembly remotely located.

The most significant feature of a Temprite Carbonator is its *unusual versatility*. For example, the pump may be installed in a remote location (as shown above) to save valuable space within an existing fountain, bar, vending machine, etc., or the carbonator may be obtained as a complete package mounted with pump, motor and relay assembly, for a fast and easy hookup!

Measuring only 5" O.D. x 15" high, the Temprite is a compact easy-to-work-with unit; actually delivers an amazing 6450 glasses of highly carbonated water from a single 20 lb. tank of CO_2 gas. No purging or venting required! No gas wasted!

Temprite Carbonators are ideal for applications where mechanically refrigerated water or soda water coolers, sweet water baths or cracked ice cooling systems are used.

NOW IS THE TIME to investigate the exceptional profit possibilities with Temprite Carbonators.



(Above) The neat Temprite Packaged Carbonator is a completely self-contained unit. The Carbonator, together with pump, motor and relay assembly, is mounted on a sturdy metal base. Water inlet, CO_2 gas inlet, and soda water outlet lines terminate at a rigid connection panel, along with a power supply cord.

TEMPRITE PRODUCTS CORP.,
P. O. Box 72-A
Birmingham, Michigan

Please send me details on the Temprite Carbonator line.

Company name_____

Address_____

City_____ State_____

Signed_____

"Be right with Temprite"

Temprite
PRODUCTS CORPORATION
P.O. BOX 72-A, EAST MAPLE ROAD
BIRMINGHAM, MICHIGAN

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AIR CONDITIONING AND REFRIGERATION News

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F. M. COCKRELL, *Founder*

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"I have always felt that whatever the Divine Providence permitted to occur I was not too proud to report. The people are not served by pussyfooting, or by that sort of journalism in which nobody will ask who is the editor of a paper or the writer of an article, and nobody will care."—*Charles A. Dana.*

It's Your Money They're Spending And Your Country They're Losing

FOLLOWING EXCERPTS from the report of the Hoover Commission should make us all pause and wince.

"It takes 20% more money to operate the Post Office's fleet of motor vehicles than it does to operate private transport fleets."

"The federal government owns 848,567 typewriters. About 235,000 persons on the federal payroll use typewriters on a full-time or part-time basis. . . . This means that the federal government owns 3.6 typewriters for every employe who uses one."

"Because of the reams of red tape involved, it can take as long as 17 months to discharge an inefficient federal government worker."

Add your own cusswords. Then *vote,* and take time off from business duties to bring other voters to the polls! And *holler.* Write your Congressmen. Better still, go down to Washington and get acquainted with them.

It's OUR duty, as citizens, to resurrect our republic, and divert its politicians from their spending orgy—which plays right into the hands of the Communist Conspiracy.

In that connection, a Warner & Swasey advertisement reads:

"Communism, socialism, fascism, capitalism—whatever you like—it's here, in the world, right now. All you have to do is go to that part of the world where your ideal is being practiced.

"Then why is it that no one wants to leave the United States for communist Russia, or for socialist England, or for fascist dictatorships in Europe or South America? And why is it that millions in those countries want—desperately want—to come here?

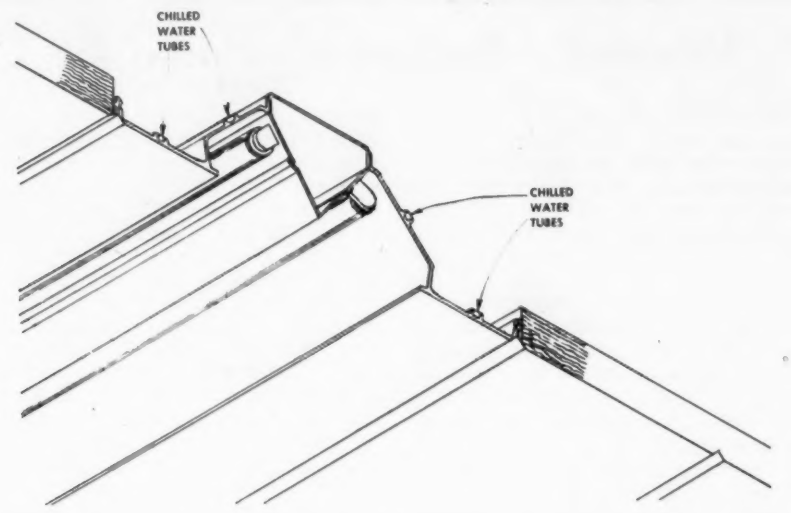
"Because the so-called benefits of all the 'isms' except capitalism disappear like a mirage when you get close to them. Only under capitalism does everyone have enough to eat; only under capitalism is there opportunity to progress, freedom to say and do as you believe; only under capitalism is there the dignity of self-respect.

"Let those who don't like eating or opportunity or freedom or self-respect—let them remember there are plenty of places on earth where they can go and do without them."

And, let us add, those who do appreciate the blessings of The American Way should go out of their way to *sell it* to the indifferent, the complacent, the fooled, and the fatuous voters in their neighborhood.

Too much is at stake for any of us to lie down on the job. Sure, it takes time. Sure, it's uncomfortable. Sure our business may occupy so much of our time that we have little energy to spare. But if we don't divert some of our working hours toward getting better (and less!) government, we won't have any businesses left.

Mockup of the ceiling panels in the garage of the Manufacturers Life Insurance Co. in Toronto is inspected by John Everetts, Jr., G. Lorne Wiggs, and Charles S. Leopold, consulting engineers on the job.



Isometric view of the recessed ceiling fluorescent light fixture to be employed at Manufacturers Life in Toronto shows how four chilled water tubes are fixed to the top. Purpose is to remove most of the heat produced by the lights. Two other types of panels will also be used, a flat panel extending around the outer perimeter of the ceiling, and a vertical panel recessed beneath windows. Some conventional air conditioning is employed but most of the heating and cooling will be handled by these three sets of panels.

Panel COOLING Makes Toronto Insurance Co. Installation Unique

TORONTO, Ont., Can. — "Newer than tomorrow" is what those who've seen the plans are saying about the 11-story addition being erected here for the home office of Manufacturers Life Insurance Co.

Architectural styling has much to do with this enthusiastic appraisal, but the feature that has aroused most interest is the year-round air conditioning system because it employs panel cooling as well as heating. This same type of system will be applied to the existing main offices of the building after the addition has been completed.

The unique air conditioning system was devised by Charles S. Leopold, consulting engineer of Philadelphia, in collaboration with Wiggs, Walford, Frost, and Lindsay of Montreal, electrical and mechanical consultant on the project. Marani & Morris were the architects.

Numerous Innovations In Concept, Detail

Numerous innovations in both concept and actual details are represented in this design, but it does have some precedent in the systems that were developed by Leopold for the new Time-Life-Fortune Bldg. in New York City and the Bankers Life Bldg., which was built in Des Moines before the war.

Leopold, of course, is widely known in his field and has many outstanding air conditioning installations to his credit in addition to the above, including the famed Pentagon, U. S. Capitol, and other structures in Washington, D. C.

The 11-story addition with ground dimensions of approximately 150 ft. by 120 ft. will add 144,500 sq. ft. of office space for the insurance company, which has been "bursting at the seams" for some time, officials say.

And although the building project is an expensive one, some $75,000 to $100,000 is being saved in construction thanks to the use of panel cooling and heating.

Panel System Frees Floor Area

Some conventional air conditioning is employed, too, but the unusual panel system frees floor area that would have been used for ducts, risers and apparatus in conventional systems and consequently saved penthouse construction on the existing building.

Operating costs are expected to be low, according to company officials, chiefly because the radiant method of heating and cooling will make it possible for office personnel to tolerate a wider range of temperature changes, perhaps as much as 6° F. compared with conventional air conditioning system design.

Double framing and glazing of windows, made of aluminum and imported from England, will contribute to operating savings, too, they believe. The English windows are said to avoid metal-to-metal contact of the outside and inside frames and sash.

Basic source of cooling for the building will be chilled water, to be supplied by an 800-ton Carrier centrifugal machine, believed to be the largest in Canada. It will be located along with the chiller in an adjacent structure housing the garage and boiler room.

Distribution and control system for the chilled water are most unusual, however. There are actually three different types of cooling (and/or heating) panels which have been designed for this system.

3 Sets of Panels Used In Each Office Area

All are aluminum extrusions backed with copper pipe coils. One set of the panels is installed in the ceiling of each office area to form a continuous band around the perimeter. Another similar panel is installed in the wall beneath each window. The third such panel is actually a part of the recessed instantaneous starting fluorescent light fixtures which are set flush with the ceiling, four copper chilled water tubes backing up each such fixture or "troffer." Purpose of these is to absorb most of the heat produced by the lights.

The recessed fixtures are designed to blend with the perimeter panels and the perforated metal acoustic tiles on the rest of the ceiling, forming a grid pattern.

In addition to these radiant panel sources of heat or cooling effect, a certain amount of conventionally treated air is supplied to the offices, chiefly for ventilating although it does perform some heating or cooling. Its volume, however, is roughly one third that which would be required in a conventional system.

Reaching Dewpoint Is Avoided

This air is electrostatically filtered, heated or cooled, and humidified or dehumidified, according to the seasonal needs. Care is taken to prevent reaching dewpoint with the resultant condensation on panel surface, but this is not so difficult a problem as might appear. Average panel surface at its coldest would be 64° F., and if the air in the building were at 75° F. and 50% relative humidity its dewpoint would be 56°. Thus, there would be no condensation.

Some sections of the building such as lunch rooms and auditoriums depend upon conventional air conditioning supplied through this same system.

System Anticipates Changes In Temperature

Control and zoning plan designed for this system are based on the basic principle of anticipating changes in indoor conditions before they occur to avoid the usual lag.

As Leopold has remarked, "Most controls are historians. They sense a change in air temperature after it occurs rather than acting in time to prevent the change."

Three sets of controls are employed for the three different panel groups. The perimeter ceiling panels are controlled by instruments responsive to the solar effect.

Operation of the panels beneath the windows is controlled by a unique system. A thermocouple is mounted in a bracket so that it can be swung into direct contact with the inner surface of the glass. Thus, it is immediately responsive to any changes in temperature of the glass and it is the glass temperature which has the major effect in directly cooling or heating the air. The couple is shielded from direct sunlight by a small metal disc on the outside of the glass.

A time clock controls the operation of the cooling panels which are integral with the lighting fixtures. The temperature here will probably be held constant, at 65° F. or above.

Similarly, a time clock controls the temperature of the relatively small amount of conditioned air that is introduced. Ordinarily this air will be delivered at a constant temperature somewhere between 60° and 65° F. In summer operation, however, this air will start out a little warmer than that to dehumidify the structure. After this initial period its temperature will be reduced to the constant point.

In general, it is planned that panels beneath the windows will provide cooling in summer and heating in winter. Chilled water will be circulated through the perimeter ceiling panels during summer operation, and during winter hot water may be used, although doubt has been expressed as to whether heating at this point will be necessary.

Only Chilled Water Goes Through Light Fixtures

Only chilled water will be circulated through the lighting fixtures, however. If cooling is not needed at this point during winter operations they'll be turned off. No hot water will be circulated here.

"In a multi-story building where the heat loss at the perimeter is compensated by a heating means at that point, there is no further need for heating the interior areas of the building," explains Leopold.

The chief source of winter heating will be the panels beneath the windows.

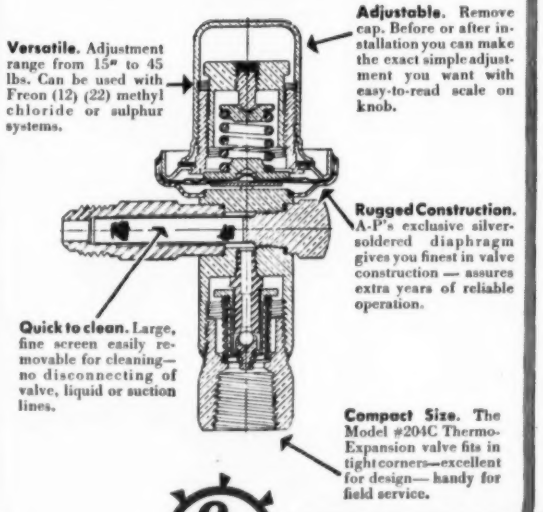
It might be pointed out that hot water booster heaters will be located in air supply ducts for a few special areas where exposure or other factors are expected to impose additional heating loads on the system.

Construction schedules call for the addition to be completed by May of next year, after which work will begin on remodeling the original office building. That is to be completed by November, 1952.

Before work on the addition started, a sample installation of this panel system was put up in the garage building for test and demonstration purposes.

INSTALL IT...SET IT...FORGET IT!

Here's why...


Versatile. Adjustment range from 15# to 45 lbs. Can be used with Freon (12) (22) methyl chloride or sulphur systems.
Adjustable. Remove cap. Before or after installation you can make the exact simple adjustment you want with easy-to-read scale on knob.
Rugged Construction. A-P's exclusive silver-soldered diaphragm gives you finest in valve construction — assures extra years of reliable operation.
Quick to clean. Large, fine screen easily removable for cleaning—no disconnecting of valve, liquid or suction lines.
Compact Size. The Model #204C Thermo-Expansion valve fits in tight corners—excellent for design— handy for field service.

NEW A-P No. 204C EXPANSION VALVE WITH NEW EXCLUSIVE FINGER-TIP ADJUSTMENT IS QUICKEST TO INSTALL . . . SIMPLEST TO SERVICE

You'll find A-P's new No. 204C automatic-expansion valve the really sensible answer to refrigeration equipment design and service problems. Because it's compact — it's easy to handle — easy to install. Because it's adjustable over a wide pressure range, it can be used with various refrigerants.

Investigate dependable A-P valves for refrigeration equipment — manufacturing or service. Write for free descriptive bulletin No. R-3 showing the amazing No. 204C and our complete line.

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13 Regional, 42 District Price Control Office Addresses Listed by ESA

WASHINGTON, D. C.—A list of 13 regional and 42 district price control offices being set up across the country was issued recently by Michael V. DiSalle, director of price stabilization.

Location of these offices, with the regional office listed first, follows:

Region I
Boston, 141 Milk St., 4th floor.
Portland, Me., Post Office Bldg., Forest Ave.
Providence, R. I., 49 Westminster St., Room 814.
Montpelier, Vt., 126 Main St.
Hartford, Conn., 179 Allyn St., suite 504.
Concord, N. H., 44 South Main St.

Region II
New York City, 2 Park Ave., 11th floor.
Buffalo, N. Y., Ellicott Sq. Bldg., 295 Main St., 2nd floor.
Newark, N. J. 185 Wool St., 2nd floor.

Region III
Philadelphia, Pa., Commercial Trust Bldg., 15th & Market St., 11th floor.
Pittsburgh, Pa. Fulton Bldg., 6th and Duquesne Way.
Wilmington, Del., school No. 28, 901 W. 8th St., room 6 and 7.

Region IV
Richmond, Va., 900 N. Lombardy St., 2nd floor.
Baltimore, Md., 108 S. Gay St., room 210.
Charlotte, N. C., Coddington Bldg., 500 W. Trade St.
Charleston, W. Va., 601 Virginia St., east.
Washington, D. C., Courts Bldg., 310 Sixth St., N. W.

Region V
Atlanta, Ga., Silvey Bldg., 114 Marietta St., N. W.
Birmingham, Ala., Bell Bldg., 1814 2nd Ave.
Columbia, S. C., 1313 Main St.
Memphis, Tenn., Marx and Bensdorf Bldg., 2nd and Monroe St.
Jackson, Miss., Clancy Bldg., 407 W. Capital St.
Jacksonville, Fla., Roberts Bldg., 221 W. Adams St.

Region VI
Cleveland, Ohio, 1901 E. 13 St.
Cincinnati, Ohio, 37-41 W. 7th St., 3rd floor.
Detroit, Mich., Book Tower, 22nd floor, Washington Blvd.
Louisville, Ky., 307 S. Fifth Ave., 2nd floor.

Region VII
Chicago, Ill., 426 Court House Bldg., 219 S. Clark St.
Indianapolis, Ind., Cole Motor Bldg., 2nd floor, 730 E. Washington St.
Milwaukee, Wis., Plankington Bldg., 3rd floor, 161 W. Wisconsin Ave.

Region VIII
Minneapolis, Minn., Northwestern Nat'l Bank Bldg., 620 Marquette, room 1009.
Fargo, N. D., 16 Eighth St., South.
Helena, Mont., 309 Federal Office Bldg., W. Sixth Ave., at Park.
Sioux Falls, S. D., Gas Co. Bldg., 114 S. Main St.

Region IX
Kansas City, Mo., 119 Ninth St.
St. Louis, Mo., Boatsman's Bank, 314 N. Broadway, room 723-729.
Wichita, Kans. 3234 E. Douglas St.
Des Moines, Iowa, 418 7th St.
Omaha, Neb., 1516 Harney St.

Region X
Dallas, Tex., Fisher Bldg., 3306 Main St.
Houston, Tex., 517 La Blanc St.
Oklahoma City, 322 N. Robinson St.
Little Rock, Ark., 555 Bldg., Broadway between 2nd and 3rd.
New Orleans, La., 1539 Jackson St.

Region XI
Denver, Colo., Central Savings Bldg., 15th and Arapahoe, 5th floor.
Cheyenne, Wyo., 1509 Bent Ave.
Salt Lake City, Utah, Old Terminal Bldg., 222 S. W. Temple, Room 104.
Albuquerque, N. M., Professional Bldg., 142 N. Monroe St.

Region XII
San Francisco, Calif., 1000 Geary St.
Los Angeles, Calif., Cairns Bldg., 108 W. 6th St.
Reno, Nev., 1475 Weels Ave.
Phoenix, Ariz., Harber Bldg., 315 N. Central Ave.

Region XIII
Seattle, Wash., National Bank of Commerce, 1110 2nd Ave.
Portland, Ore., Lincoln Bldg., 208-222 S. W. 5th St.
Boise, Idaho, American Legion, 7th and Bannock Sts.

Wanted: Reasonably-Priced Ice Cream Merchandiser with Glass Front

WASHINGTON, D. C. — A glass front ice cream merchandising cabinet, if one could be produced at a reasonable price, would be much preferred to open top cabinets with illuminated superstructures, a survey of 625 ice cream manufacturers revealed.

The survey was conducted last summer by the International Association of Ice Cream Manufacturers. Results have been printed in a bulletin entitled "Cabinet Preference Analysis," which is being sold for $1 by the association.

The survey reported that 94% of the ice cream manufacturers polled believed that the open top cabinet with illuminated superstructure increased ice cream sales.

But when asked, "If a satisfactory glass front cabinet could be manufactured at a reasonable price, would you prefer this type to open type cabinets?", 71.68% of them said that they would. On the other hand, 22.24% said they would not prefer the glass front cabinet.

The manufacturers also indicated that they preferred 8, 10 and 12-cu. ft. glass front cabinets in that order. But the percentage of preference was 27.27, 25.70, and 25, respectively.

In the open top cabinet, 36.66% of the manufacturers preferred the 8-cu. ft. size, 28.50% the 12-cu. ft. size, and 21.19% the 10-cu. ft. size.

Preferences were also broken down to show manufacturers who preferred only one size, two sizes, or three sizes. On this basis, in the open top cabinet category, 20% of the manufacturer listed the 12-cu. ft. cabinet alone, 18% the 8-cu. ft. cabinet alone, and 10% the 10-cu. ft. cabinet alone.

Most popular combination where two preferences were given was the 8 and 10-cu. ft. units polling 11% of the votes. The 8 and 12-cu. ft. combination was second with 7.36%.

Where three preferences were indicated, most votes (3.52%) were given to the 5, 8, and 12-cu. ft. units. Second choice was the 8, 10, and 12-cu. ft. cabinets with 2.24% of the votes.

For glass front cabinets, the 10-cu. ft. was most popular with 13% of the manufacturers mentioning it alone. Eleven per cent mentioned the 12-cu. ft. unit alone and 7.84% the 8-cu. ft. unit alone.

Among those preferring two cabinet sizes, the 8 and 10-cu. ft. units got 5.28% of the votes and the 6 and 8-cu. ft. cabinets got 3.2% of the votes.

Only triple combination getting any substantial approval was the 5, 8, and 12-cu. ft. sizes with 3.52% of the votes.

Sixty per cent of the manufacturers said that they used their open top cabinets for display purposes only. Thirty-one per cent indicated that they used theirs for both display and storage. The remaining 9% used their units both ways.

Asked if they preferred illuminated ice cream pictures to mirrors reflecting the actual product, 78.56% said that they did while 17% preferred the mirrors, it was revealed by the survey.

What's Preventive Maintenance?

It's Key to Extra Profits for Service Firms That Understand What It Means

CHICAGO — "What is meant by preventive maintenance" of refrigeration equipment?

That question was posed and answered recently by Commercial Trades Institute here for the benefit of servicemen considering selling preventive maintenance contracts to increase their profits.

In its publication, *The Skilled Tradesman,* the school gave this answer:

Preventive maintenance "means for a nominal monthly charge you will check (the customer's) entire system for defects. Most defects are minor before they become major. If these defects can be taken care of while in a minor stage, they are much less expensive for the customer.

"Here is what we do: Check compressor for efficiency, check condition of belt (tension, etc.), clean condenser (if air cooled), oil motor and check completely, check motor control (low pressure or thermostatic) to see that it is functioning properly.

"Check expansion valve to see that it is functioning properly, check box and evaporator temperatures.

"Also check any other accessories that the system might have on it such as high pressure cut-out switch, pressure relief valve, two temperature valves, strainer, oil separator, water valve, dehydrator, and most important on water cooled systems, the condenser should not be forgotten.

"Check condenser by removing the drain line from condenser to sewer and hold in upright position with machine shut off. Water will collect on top of tube. Watch for bubbles in water. If bubbles appear, it would indicate refrigerant escaping and a leak in the condenser.

"Litmus paper can be used, depending on type of refrigerant. On multiple or multiplex systems, it is well to remember to check two way hand valves for leaks and mechanical defects."

3 Motor Mfrs. Name Quinn Authorized Service Station

LONG ISLAND CITY, N. Y.—Harlan B. Quinn of the P. J. Quinn's Sons Electric Motor Co. here has announced that his firm is now a factory authorized service station for Wagner Electric Co., Baldor Electric Co., and the A. O. Smith Corp. The service firm repairs electric motors covered by the motor manufacturer's warranty.

Builder Sees Apartments of Future Including Air Conditioning Units as Standard Equipment

FLORAL PARK, L. I. — Robert Metrick, builder of air conditioned Childs Garden Apartments here, predicted that some day air conditioning units would be part of the equipment supplied in apartments just as stoves and refrigerators are today.

A recent survey of a large group of tenants by General Motors Corp., supplier of the air conditioning units in Childs Garden Apartments, revealed some startling facts, he stated.

Without exception, he said, all tenants living in air conditioned apartments this past summer stated that they had never understood the value of air conditioning as much as they do now.

Adults and children alike slept comfortably through the warmest summer evenings, apartments were practically dustproof, odors nonexistent, and individuals suffering from hay fever or asthma reported a great improvement in their health.

Air conditioning should be included in all future developments when the building industry gets going again, Metrick said.

To Save Space-To Save $'s

—here is America's Most EFFICIENT REFRIGERATOR

400 lbs. Fresh Food Capacity *plus* 200 lbs. (approx.) Freezer-Locker Space

ONE CONDENSING UNIT ADJUSTABLE CONTROL

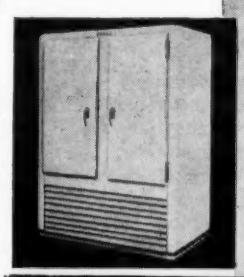
JORDON exclusive, thoroughly proven in thousands of installations. Saves floor space — speeds food handling — "dresses up" any location — cuts electric consumption in half because ONE refrigerator, ONE condensing unit, does the work of two!

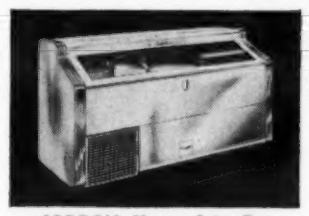
AVAILABLE IN 2 SIZES FOR EVERY REQUIREMENT

JORDON 14/6. 14 cu. ft. Normal refrigeration. 6 cu. ft. Freezer-locker space. Height 71¼". Depth 33". Length 43½".

JORDON 10/4. 10 cu. ft. Normal refrigeration. 4 cu. ft. Freezer-locker space. Height 69". Depth 29". Length 39".

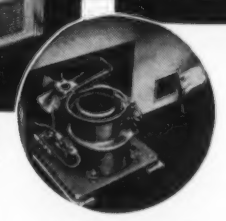
Write For Special Data Sheets





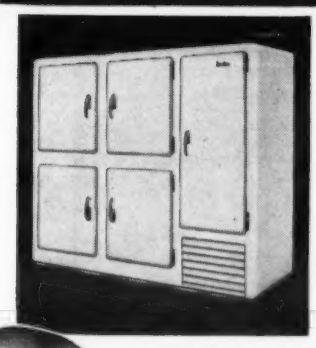
JORDON Heavy-duty Dry Beverage Coolers. 12 to 32 case capacity.

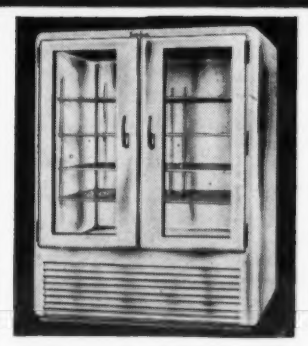
JORDON Beverage Cooler with factory attached PANELYTE BAR TOP. All sizes.

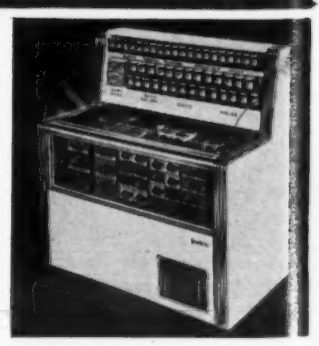


Pull-Out Hermetic Units on Tracks

JORDON MANUFACTURES A COMPLETE LINE OF REACH-IN REFRIGERATORS and BEVERAGE COOLERS





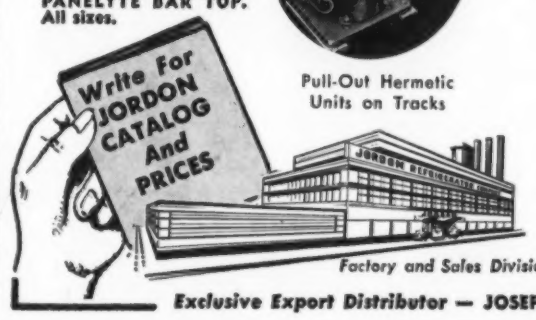


23—30—42—60 cu. ft. models available. Self-contained, hermetic units or for remote installation. Solid or glass doors.

JORDON REFRIGERATORS are sold and warehoused nationally by responsible and experienced dealers.

The New JORDON "TELEVISION PANTRY"

In the trend of the times! A stylized, low-temperature, open-top, glass-front refrigerator with a handy "reminder" shelf-type superstructure. One of the many models available in the complete JORDON line of low temperature merchandising and storage equipment. Special catalog available.



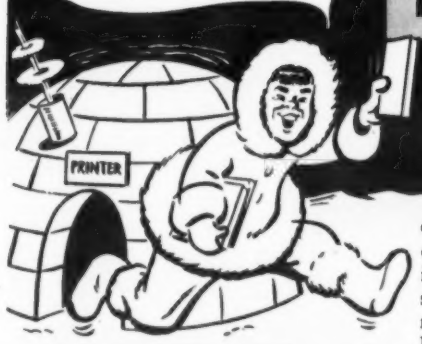
Factory and Sales Division

Jordon AMERICA'S MODERN COMPLETE LINE

JORDON REFRIGERATOR CO.
58th Street & Grays Avenue
Philadelphia 43, Pa.

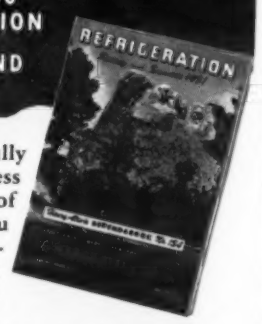
Exclusive Export Distributor — JOSEPH MILLER, 11 Broadway, New York City 4, N. Y. • Cable: JOMILLER

YOU CAN'T GET ALONG WITHOUT THIS NEW PARTS CATALOG



HARRY ALTER'S SPRING-AND-SUMMER 1951 DEPENDABOOK No. 154

OVER 9,000 REFRIGERATION PARTS AND SUPPLIES



• To successfully conduct a business in these days of scarcities, you really need DEPENDABOOK No. 154...If it's available you'll find it listed in this latest edition.

WRITE FOR YOUR COPY ...ON YOUR LETTERHEAD

THE HARRY ALTER CO. WHOLESALE ONLY

1728 SOUTH MICHIGAN AVENUE CHICAGO 16, ILL.

134 LAFAYETTE STREET NEW YORK 13, N. Y.

"Service doesn't falter when it comes from Harry Alter"

'Hot-Cold' Test Refrigerator

Three-Tank Unit Freezes, Thaws Construction Materials To Check Effect of Temperature Changes

ATLANTA — A refrigerated test tank designed to alternately freeze and thaw concrete block and other construction materials has been produced for use by U. S. Government engineers by Refrigeration Appliances, Inc., specialized refrigeration contracting firm here.

Gordon L. McWilliams, head of the firm, explained that each test-installation consists of a series of three tanks that will provide temperatures ranging from 0° F. to over 100° F.

Exposed copper coils in each tank first freeze the materials to be tested and then electric strip heaters, which alternate with the cooling coils, thaw them out. A complete thawing cycle takes two hours.

Refrigeration is provided by a 25-hp. Frick compressor with an anti-freeze solution passing through the chilling coils.

McWilliams said that he had worked with the U. S. Army Corps of Engineers and other engineering agencies to develop a practical "hot and cold" type of test refrigerator.

Purpose of the project is to test various forms of man-made stone, concrete block, and native materials that are considered for use in dam construction, and buildings where temperature changes are frequent and severe.

McWilliams said that units have already been installed in Marietta, Ga., and Omaha, Neb., with more scheduled for the West Coast.

He declared that each installation consists of a series of three tanks, located in a horizontal or vertical row according to the space available.

The Omaha unit was designed so that 144 typical concrete blocks could be tested in a 4 by 4 by 20-ft. space. The tests consist of putting the blocks through 38 two-hour thawing cycles and then checking to see what the effect of the rapid temperature changes has been.

"Under most circumstances," McWilliams explained, "a block of known material with given characteristics is frozen at the same time as a similar block of a new test material. The two are compared side by side for efficiency.

"The tests will prove definitely whether native stone, for example, can be used in cement for the construction of a dam, or whether quarry stone can be used for building where frequent and severe temperature changes take place.

"The refrigeration units can also be used to test samples of a contractor's cement or concrete at random during actual construction to assure the government that it is getting its money's worth."

MISSING SOMETHING?

More and better useful information is yours for the asking. See "What's New" page.

Servel Revises Warranty Policy on Exchanging Condensing Unit Parts

EVANSVILLE, Ind. — A revised standard warranty policy providing more liberal terms for the handling of condensing unit parts exchange transactions has been announced by the electric refrigeration division, Servel, Inc.

The new policy, effective as of Jan. 15, now permits a dealer or service engineer to obtain a replacement for any defective condensing unit or compressor part without a cash deposit, provided the part is properly covered under the terms of the warranty, according to George S. Eager, division service manager.

Previously, a deposit was required pending factory approval of the exchange transaction. Under the new policy, Servel's authorized parts suppliers will handle all such warranty transactions directly with the dealer or service firm, free of cost.

A further change in the warranty policy covers payment by the factory of all shipping charges on exchange parts between the factory and Servel authorized parts supply points. Heretofore, the customer paid factory transportation costs on defective parts replacements obtained through Servel parts supply depots.

More than 90 parts supply outlets have now been established throughout the country to handle Servel condensing units and parts replacements, Eager said. These firms have been equipped with complete testing facilities.

Buyer's Memo to Visiting Salesmen Informs Them How To Get and Keep His Business

ATLANTA — An effective means by which the buyer or purchasing agent can solve the problem of overlong dissertations and wasted time with salesmen calling upon him has been developed in the form of a mimeographed letter by Charles S. Martin, president of the Charles S. Martin Co., Atlanta.

Designed to be distributed to salesmen by a secretary, while the former are waiting to see Martin, the letter is headed "To You Who Call on Me—Resolve to. . . ." Listed below are eight points, which Martin insists that all salesmen attempting to do business with him keep in mind.

These are:

1. Know as much as you can find out about me and my needs before you make the call. Your name for it is the pre-approach—planning of the sale.

2. As we meet, don't tell me about you, but start immediately talking about me—my needs—my interests—my convenience—my profit. Tell me how I can sell more.

3. Remember that buying is done with the head and the heart, therefore, use care not to offend. I may not like your brand of jokes or cigars, so leave them outside!

4. Tell me about your product or service, but tune it in with my needs. Tell me these things, but don't teach me! I don't like to be left too far behind you on the path of knowledge.

5. I may at some point want to tell you how far you have progressed with your sale, and what more you can do to get the orders, so better hear me out when I talk.

6. Learn about my needs and you'll see the opportunity to sell me many more items than the one we now buy from you.

7. Don't take my business for granted, as I am apt to fool you. Work as hard to hold my business as you did to get it—and your competitors will be doing the worrying.

8. Finally, I want your loyalty, but I don't expect loyalty at the expense of your company, for it is then robbed of its true worth.

Distributing these among salesmen awaiting an audience, the Atlanta buyer has found, has worked some satisfactory changes in the salesmen's approach, in the amount of time they consume, and finally, in the way in which they offer the product.

POTENT: Ad Listing Recent Customers Ups Commercial Dealer's Sales

ATLANTA—Three column, 10-in. high advertisements, which list as many as 20 new commercial refrigeration installations made by the firm in recent weeks, have proven a potent sales-builder for Refrigeration Appliances, Inc. here.

The advertisements were developed by Gordon L. McWilliams, president of the firm, as a simplified means of "giving the sold customer a pat on the back" and impressing retail grocers and foodstore operators throughout the city.

"Everybody likes to see his name in the paper," says McWilliams. "Therefore, we run these advertisements every six or eight weeks, carefully compiling a list of the fixtures, commercial refrigeration installations, and specialty jobs which we have installed during the period since the last advertisement.

"When the display advertisement is complete we telephone each of the persons whose name is listed, and invite him to watch the newspaper on the specific date when it will be released.

"This, we have found, helps make it the most effective advertising we have ever used," McWilliams added.

A typical advertisement lists as many as a dozen grocery stores, unusual installations, such as laboratory refrigeration for the U. S. public health service, biological refrigerator for a prominent physician, a dry bottle box for a cafeteria, a walk-in box for a large restaurant, display refrigerators for a 5 and 10-cent store, according to McWilliams.

One of the most interesting features of the advertisement is a special section under the title "Engineered Jobs" which lists sites at which McWilliams, a licensed refrigerating engineer, has designed unusual custom installations. A typical advertisement lists a department store, a Legion club, a hospital, a meat packer, or a dairy with full credit given to some contractors on every such job.

Often the Atlanta refrigeration dealer will receive a certain amount of publicity in addition to the advertisement. A typical such newspaper story, under the headline "Refrigeration Appliances Makes New Installations" gives some of the details of the many grocery store, hotel, hospital, and cafeteria installations which have been made during the month past.

J. Duncan Appointed to Detroit Licensing Board

DETROIT—J. Duncan of J. Duncan & Sons, local refrigeration contractor, has been appointed for a three-year term on the Refrigeration Board of Examiners which reviews applications for official refrigeration licenses issued annually by the City of Detroit under the municipal refrigeration code.

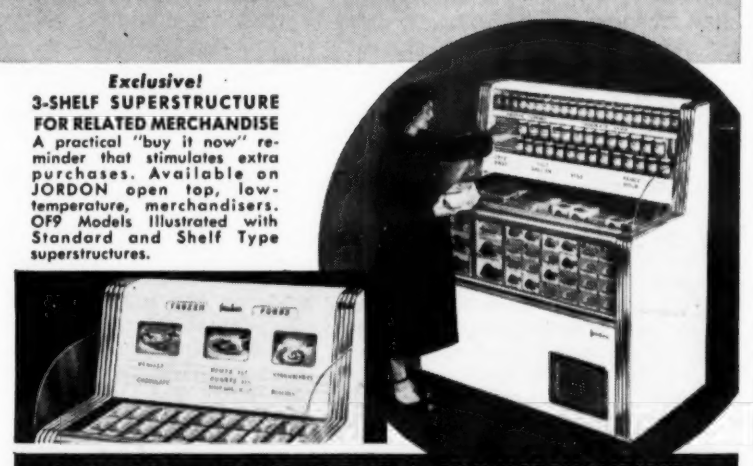
Duncan is a member of the board of directors of the Refrigeration Contractors Association of Detroit.

TO MAKE THE MOST OUT OF EVERY LOCATION—
Install Equipment by
JORDON

—top sales makers for
FROZEN FOODS
and
PACKAGED ICE CREAM

Because JORDON has built into this fine equipment the features that merchants seek and appreciate, JORDON dealers from coast to coast are getting the cream of this profitable equipment business. The JORDON '51 line of frozen food and packaged ice cream merchandisers gives the dealer top dollar volume, fast turnover, and the satisfaction of knowing that he is installing equipment with an outstanding record of success in thousands of the leading independent and chain organizations of America. Your inquiry is invited!

Exclusive!
3-SHELF SUPERSTRUCTURE FOR RELATED MERCHANDISE
A practical "buy it now" reminder that stimulates extra purchases. Available on JORDON open top, low-temperature, merchandisers. OF9 Models Illustrated with Standard and Shelf Type superstructures.



OPEN TOP — GLASS FRONT ★ SELF-MERCHANDISERS

OF-9, illustrated above. Capacity approx. 320 standard packages frozen foods. Model OF-17 (right), approx. 600 standard packages. Note extra wide top opening, bright illumination. Heavy duty, wrap-around coils and freezer divider plates. Hermetic condensing unit on pull-out tracks.

SLIDING DOOR MODELS WITH OR WITHOUT SUPER STRUCTURE
9-12-17-26 Cu. Ft. Models

Model M-17 (left) capacity approx. 625 standard packages.
Model M-9-M-12 (right) 360-480 standard packages.

Features include: Stainless Steel top apron, door frames, door racks. Doors can be removed for peak hour rush. Ready for plug-in operation with fully warranted hermetic units. JORDON white auto-body exteriors. Superstructures (optional) have brilliant, full color subjects.

Model M-17 Without Superstructure. Capacity approx. 625 standard packages.

Sold, Serviced, Warehoused, Nationally!
Write For Catalog

Factory and Sales Division

Jordon
AMERICA'S MODERN COMPLETE LINE
JORDON REFRIGERATOR CO.
Factory and Sales Division
58th St. and Grays Ave., Phila. 43, Pa.
CABLE: "JORDONREF" BElgrade 6-4510

Exclusive Export Distributor — JOSEPH MILLER, 11 Broadway, New York City 4, N. Y. • Cable: JOMILLER

Lovely to Look at... So Wonderful to Own

12.5 cu. ft. BEN-HUR. Holds up to 625 lbs. Others—8.5, 16 and 20 cu. ft.

"We've a supermarket at our fingertips—better food at bargain prices" say happy BEN-HUR Freezer owners. And the savings in food costs save the freezer cost in months.

Unique selling tools, the most effective in the industry, help BEN-HUR dealers to easy freezer sales records. Find out about this profit-opportunity!

BEN-HUR MFG. CO. • Dept. AC — 634 E. Keefe Avenue • Milwaukee 12, Wisconsin

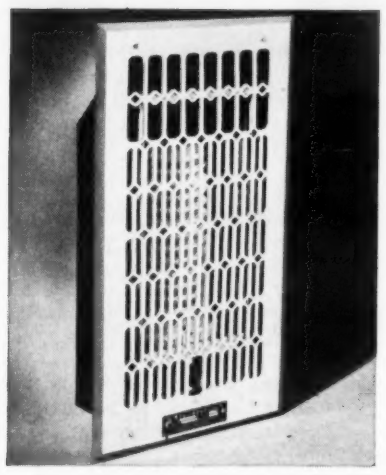
BEN-HUR FARM and HOME FREEZERS

HEALTHFUL LIVING THROUGH FROZEN FOODS

What's New

When requesting further information on new products, please use "Information Center" form.

Bathroom Heater Warms By Radiation, Circulation



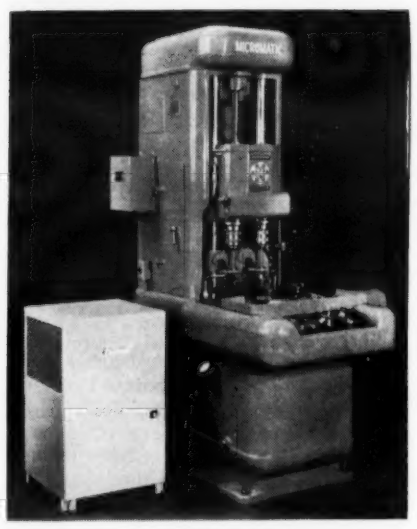
——KEY NO. A-220——

SUNNYVALE, Calif. — Double-action heating—heating by radiation of infrared rays plus heating by continuous circulation of warm air—is provided by the new bathroom model electric-heater available from Westinghouse Electric Corp. here.

Available as either a 1,250-watt, 4,266 B.t.u. per hour model or as a 1,500-watt, 5,120 B.t.u. per hour model, the new heater connects to standard 115-volt alternating-current outlets.

Wall opening required for installation of either model is 17¾ in. high, 8¼ in. wide, and 4 in. deep. Both flange and sides are pre-drilled for screws to enable quick installation.

Frostrode Announces Line of Fluid Coolers



——KEY NO. A-221——

VICKSBURG, Mich. — A line of industrial fluid coolers for controlling the temperatures of coolants such has honing, grinding, and cutting oils; water; hydraulic oils; and plating solutions used in industrial processes has been announced by Frostrode division, Viking Products here.

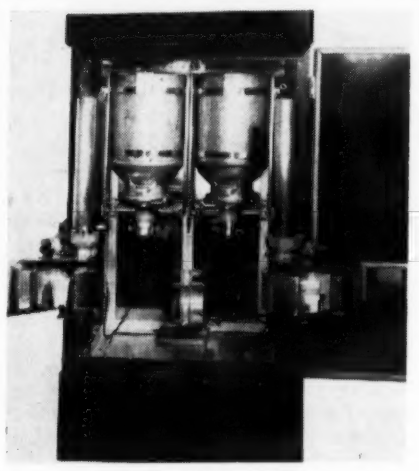
Frostrode fluid coolers use an air-cooled refrigeration cycle to cool the oil or other coolant flowing through the cooler. The flow circuit is designed to provide a maximum heat transfer with a minimum pressure drop or flow restriction, according to the manufacturer. Coils are constructed of either steel or copper tubing.

Use of the Frostrode cooler brings closer working tolerances on the work piece, higher production rate, increased tool life, and decreased tool maintenance, the manufacturer said.

The coolers are built in standard models to handle most applications and in special models with explosion-proof construction for hazardous fluids and locations.

The standard line of six models range in capacity from ⅓-hp. and 4,000 B.t.u. per hour to 2-hp. and 23,000 B.t.u. per hour.

Gravity Feed Bulk Milk Vendor Tested In East



——KEY NO. A-222——

MANCHESTER, N. H.—A gravity feed bulk milk vendor has been developed by the Food Engineering Corp. here and is now being delivered to a few selected vending operators and dairies for pilot operation, H. A. Loebel of the company announced.

The refrigerated vendor, which has been under development for four years, has a capacity of 80 qts. in two 40-qt. cans. It features a disposable, all plastic valve which measures and pours directly from the milk can by gravity into a paper cup. The valve is discarded after the can is emptied.

Magnetic operation of the valve eliminates all moving parts except for an internal polyethylene plunger.

A dual operating feature automatically switches operation of the vendor from an empty can to the reserve full can. At rush periods, milk can be drawn from both cans. Cans are replaceable any time.

A rotary vending or delivery mechanism of stainless steel fills the paper cup behind a stainless steel barrier, then rotates it out to the customer without ever exposing the inside of the machine, Loebel said.

The cabinet is made of heavy gauge, all welded steel finished in baked enamel with illuminated plexiglas artwork. The entire inside of the cabinet is stainless steel.

Outer dimensions are 23 by 43 by 74 in. The cabinet is insulated with 2 in. of fibre glass; 3 in. in the door.

Sealed refrigeration systems by Westinghouse or Tecumseh are used. A continually running blower on the cooling coils pressurizes the cabinet and is said to eliminate any defrosting problem. A plug-in electrical control system can be serviced by replacing the relay in a few minutes.

Coin changers for 5, 10, and 25 cents are offered as optional equipment. The standard mechanism accepts nickels and dimes.

Patents are pending or are applied for on the valve, dual operation, and rotary vendor.

Electric Torch Heat Gun Does Not Scorch Surfaces

——KEY NO. A-223——

PHILADELPHIA — Latest model "Heat-Gun" to be developed by Kinetic Products Corp., here, is a heavy-duty, "Thermal-Jet" flameless electric torch claimed to supply "all of the heat necessary for 95% of all ordinary flame torch purposes."

The new model utilizes the radiant electric heat principle reputedly originated by Kinetic engineers for hand torches.

It has a one-piece aluminum jacket with 3-in. orifice, a high speed, replaceable electric unit, and a pistol grip handle with an 8-ft. heavy-duty cable. The gun can be used with 115-volt alternating or direct current. Total weight is approximately 2 lbs.

According to the manufacturer, the penetrating heat projected by the torch "will reduce multi-layers of paint, enamel, or varnish to a dry, flaky ash which can be removed in one stroke." If desired, paint can be removed without disturbing undercoat, filler, or caulking, it is said.

Although used like a blow torch, the heat gun does not burn or scorch the surface, thus permitting it to be used on canvas covered surfaces as well as on metal or wood.

A wide variety of high-heat uses is claimed for the torch. In addition to removing paint, it is now in use for melting "dope" from wiring in generator and motor repair shops, melting sealing compound from storage batteries, melting insulation and wax from cables, heating and drying cold or wet power equipment, and annealing light metals.

List price of the model, SA 750, is $9.95. The replacement element is priced at $2.25. The torch is distributed nationally through jobbers.

Current Literature Available

To obtain further information on the literature listed below please refer to key number preceding listing. Please use the "Information Center" form on "What's New" page.

Catalog Provides Data On Radi-Vector Systems

——KEY NO. M-220——

HARTFORD, Conn. — The Vulcan Radiator Co. here recently announced its new 16-page Radi-Vector (Vulcan Baseboard) catalog (No. 53) containing up-to-date technical information helpful in designing and installing Vulcan Radi-Vector (baseboard) systems.

The 1951 catalog gives the complete I-B-R ratings and pipe-sizing tables for use in designing Radi-Vector system in series; tables for use in designing two-pipe steam systems, two-pipe forced hot water systems, two-pipe gravity hot water systems.

There are illustrations and detailed descriptions of Vulcan's newest cover designs, plus illustrated data on all Vulcan accessories including the new rod hanger and improved control dampers for both Type K and Type L covers.

Step-by-step illustrated instructions for installation of Radi-Vector, are also included.

Catalog No. 53 will be available for distribution during the early part of 1951.

Filtrine Issues Reference Manual on Chilled Water

——KEY NO. M-221——

BROOKLYN—A reference manual for modern food service on chilled water has been issued recently by the Filtrine Mfg. Co. here.

The manual is a 12-page mailing piece that makes recommendations for drinking water service in restaurants, describes the company's water conditioning equipment, outlines how different coolers are used for different applications, and presents a set of typical specifications.

Copies of the manual are available on request.

Westinghouse Book Shows Lighting, Floor Layouts

——KEY NO. M-222——

PITTSBURGH—New lighting schemes and modern floor plans of kitchens and laundries for the new or remodeled home are illustrated in a 24-page booklet just published by the Better Home Bureau of Westinghouse Electric Corp.

"Electrical Living—And How To Have It" is basically a planning booklet designed to aid the homemaker in obtaining the highest degree of convenience and comfort from electricity, the company said. Each room of the house is studied for applications of electricity that will add to its efficiency, convenience, or beauty, it was further pointed out.

The proper arrangement of appliances in the kitchen, varied uses for the laundry room, novel lighting effects for the bedroom, and new features for the bathroom are illustrated in the booklet.

As a further aid to homemakers the booklet provides the scientific principles that guide kitchen design a suggested scheme for wiring circuits and load centers, and the wiring features to look for in the well-constructed home.

Another section of the booklet is devoted to other sources of planning help, as well as suggested means of including new appliances in the mortgage cost of a new home, or adding the cost of appliances and modernization to an existing mortgage.

Copies of the booklet may be obtained upon request at 10 cents per copy.

Four Folders Describe Warren Commercial Cases

——KEY NO. M-223——

ATLANTA—A series of four folders describing its line of commercial refrigeration equipment was published recently by the Warren Co., Inc., here.

One folder illustrates and gives specifications on the models RCV and OVS fresh produce refrigerators. A second does the same for the company's new "Commodore" model display and storage space.

The third folder gives complete data on the model WODD dairy products merchandiser, and the fourth covers the models L-5 and L-10 low temperature display and storage cabinets.

for more
Ice Maker
SALES
. . . FILTRINE
"Taste - Master"
Demineralizer
in the water line
Cuts Service
No Tastes
Clear Ice
Fits All Makes
Small Cost
Crystal ice . . . without sludge-forming rust, sediment, mineral residue . . . chlorine taste . . . "milkiness." Ends major source of service calls. Write for new literature.
Filtrine
Water Coolers and Filters for 40 Years
FILTRINE MANUFACTURING CO.
BROOKLYN 5, N. Y.

FOR FASTER DISPENSING . . MORE ECONOMICAL COOLING . . BETTER DISPLAY *insist on*

P-H DRY BEVERAGE COOLERS

(Available in "*Lifetime*" PORCELAIN OR STAINLESS STEEL EXTERIORS)

THE BEVERAGE DISPLAYER

Sliding Door Type

5 MODELS to Choose From

THE STANDARD DISPLAY COOLER

Adjustable Shelves

5 MODELS to Choose From

FEATURING

1. Porcelain or Stainless Exteriors
2. White Porcelain Interiors
3. Welded Steel Frame
4. Sealed-In Fiberglass Insulation
5. Triple Thermopane Glass Doors ("Displayer" and "Standard" models)
6. Grad-U-Matic Air Conditioning
7. Underwriters Approved

THE DISPENSER AND STORAGE COOLER

7 MODELS to Choose From

With Rollaway Stainless Steel Doors — Adjustable Partitions

THE MARK OF A GOOD CASE — THE P-H LINE — ESTABLISHED 1898

For Complete Information — Contact Your Nearest P-H Dealer or Write Direct!

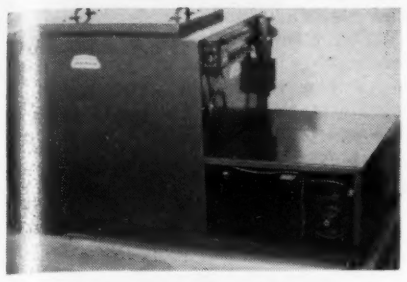
PUFFER-HUBBARD MANUFACTURING CO.

GRAND HAVEN, MICHIGAN

DISPLAY CASES • DAIRY-DELICATESSEN CASES • PASS-THRU CABINETS • DRY BEVERAGE COOLERS • DOUGH RETARDERS • FLORIST CABINETS • WALK-IN COOLERS

What's New (Cont.)

Alpha Low Temperature Cabinets Hold -60°F., -150°F.



—KEY NO. A-224—

DETROIT—Now in production, a new line of self-contained low temperature cabinets which includes a -150° model has been introduced by Alpha Electric Refrigeration Co., here, announces Charles Earl, who heads the company.

Basically, two standard models are being offered, one rated at -60° F. and priced at $1,000, the other at -90° to -150° F. listing at $2,500, the company says.

Each offers 4 cu. ft. of storage space. The -60° model is powered by a single-stage condensing unit; with two-stage or cascade hookup it produces -70° to -80° temperatures. In any case, it employs an air-cooled condenser (water-cooled condenser is optional) and operates on 115 or 220-volt current so that it is a plug-in type unit. The -90° to -150° model is cascaded and water-cooled.

Dimensions of the -60° model are 32 in. high, 62 in. long, 30 in. deep. It contains 7 in. of insulation all around and is fitted with a lift-out door with 4 in. of insulation. A low pressure control adjustable from 0° to -60° F. is included as standard equipment. "Freon-22" is the refrigerant.

The -150° model is slightly larger, measuring 38 in. high, 74 in. long, and 36 in. deep. Insulation here is 10 in. all around, while the low pressure control operates over a range of from 0° to -150° F. Refrigerants used are "Freon-22" and ethane.

Included as standard equipment in both series is a high-pressure safety cut-out set for 175 p.s.i., and fusible plug.

A service advantage claimed for this design is that the system "can be charged as easily as a conventional food freezer."

Now in the process of setting a national distribution organization, Alpha announces that it is prepared to build the cabinets in other than the standard sizes being produced and can offer special additional equipment such as adjustable and indicating temperature controls, recorders, evaporators in stainless steel, etc. Cabinets are shipped with a six-month guarantee.

2-Head Draft Station Draws Carbonated or Plain Drinks

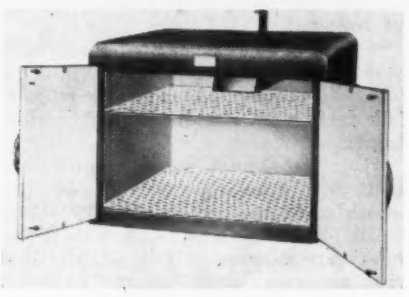
—KEY NO. A-225—

CHICAGO — The Bastian-Blessing Co. here has announced a new "Cold-point" beverage dispensing system, which enables an operator to dispense uniformly proportioned carbonated or plain beverages directly from a draft stand at the fountain.

The special draft station with two draft heads occupies space only in the syrup rail—space which ordinarily would be used for handling the syrups for the two drinks dispensed.

Both water and syrup lines are mechanically refrigerated and kept cold right up to the point of delivery, the manufacturer said. "Thus every drink drawn is chilled to the proper temperature, even at fountains not in constant use."

Portable Industrial Oven Holds Even Temperature



—KEY NO. A-226—

CHICAGO—A new portable industrial electric oven that will maintain a uniform temperature throughout, has been introduced by the Grieve-Hendry Co., Inc., here.

The manufacturer says that it can be used for baking enamels, lacquer, wrinkles and other finishes, for dehydrating a number of products, for drying plastic granules and parts after cleaning, and for pre-heating molds.

Fresh air is drawn in and stale air is driven out through specially located vents by means of a fan driven by a motor mounted outside.

He claims that no stratification is possible and that change of air and forced circulation is advantageous for any dehydration and baking process. Adjustable damper gives a wide range of constant temperatures.

The oven is so constructed that one will nest on top of another. They can be used in groups and can be operated as individual ovens, or selected ovens can be cut-out and heated at different temperatures.

Construction is of heavy gauge steel with asbestos air-cell insulation. The model CR-1 has a single phase, 110-volt motor that can be operated from any 110-volt outlet without special wiring. D.C. units are available.

This model is 29 in. wide, 24 in. deep, and 20½ in. high on the inside. A removable shelf permits use of the entire height.

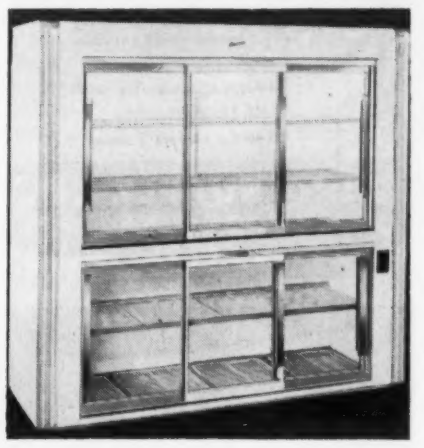
The model CR-1 can heat to 225° F. in 15 minutes. It is priced at $79.50. Other models for higher temperatures or models with four shelves or specials are available.

Thor's 'Rocket' Styling

—KEY NO. A-227—

One piece skirts, legs made of molded Fiberglas, and a "Loadmaster" control panel mounted on the skirt front are features of two new Thor wringer-type washing machines introduced at the Mart.

Howard Double-Duty Wall Case Adapts To Many Uses



—KEY NO. A-228—

PHILADELPHIA — Howard Refrigerator Co., Inc., here, has announced availability of a new double-duty wall case which is also converted to the company's florist case with full-length glass doors.

The case is manufactured in lengths of 4 ft. 6 in., 6 ft., 8 ft., 10 ft., and 12 ft. It is 75 in. high and 29 in. deep.

The case comes with glass Thermopane doors or solid storage swing doors and porcelain display shelving or adjustable steel shelving. All models are of steel welded construction, are finished in pure white baked enamel, and have fluorescent lighting.

According to the manufacturer, the case is adaptable for beverage, dairy, vegetable, pastry, delicatessen, and biological cooling.

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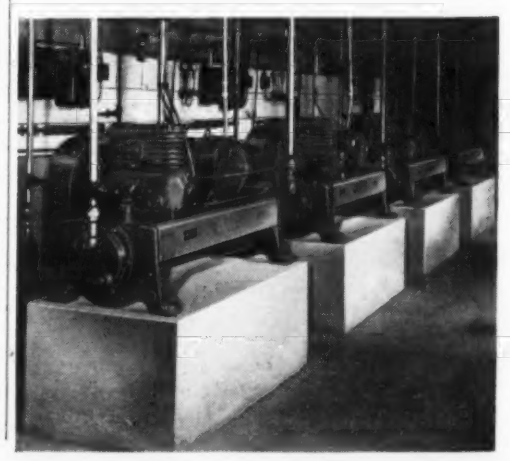

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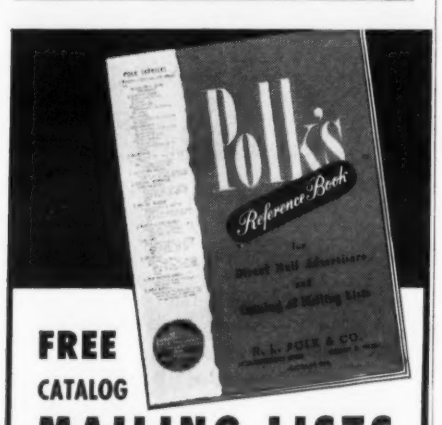

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Heat Pump Progress Report: *Activity In Field Mounts as Some Major Producers Near Mass-Production Stage*

NEW YORK CITY—Few developments in refrigeration and air conditioning during recent years have excited the public as much as the heat pump, but the industry itself has also shown tremendous interest in this revolutionary method of heating combined with year-round air conditioning.

Typical of the importance attached to the heat pump by the profession was the symposium on the subject staged during the most recent annual meeting of the American Society of Refrigerating Engineers. In effect the symposium presented a lengthy progress report on the heat pump, not only as applied to residential and commercial heating, but as a domestic water heater as well.

Some major manufacturers are approaching the mass-production stage, at least 12 are engaged in heat pump activity, either as producers of heat pumps or in research and experiments on the subject; at least 16 utility companies as well as 13 universities and colleges in addition to other institutions and individuals are actively concerned.

These were some of the data revealed by the chairman of the symposium, Prof. Charles H. Coogan, Jr., head of mechanical engineering for the University of Connecticut, reporting results of a survey.

The group also heard a progress report on the heat pump by W. F. Friend of Ebasco Services, Inc., and a member of several heat pump committees, including the AEIC-EEI; heard S. J. Levine of General Electric's Air Conditioning Department describe performance of G-E's pilot model packaged heat pumps; R. A. Gonzalez of Chrysler Airtemp explain the role of an unloading type compressor in a heat pump installation; M. M. Smith of Muncie Gear Works discuss "Living with a Thousand Marvairs," and A. W. Ruff of V. C. Patterson and Associates give "Practical Information on Design and Field Test Results" with a heat pump water heater.

There was considerable discussion from the floor, too.

In his report, Friend summarized recent activities and present trends as follows:

" . . . the heat pump must ultimately be considered, not primarily as a method of heating in winter, but rather as an all-year air conditioner. . . .

" . . . the heat pump should first achieve general acceptance in the South and Southwest. . . .

" . . . for several years ahead the heat pump may still constitute for residences a semi-luxury type of plant, and probably will continue to find its main market in commercial establishment.

TREND IN HEAT SOURCES

"As to heat sources, shift of emphasis from ground coils toward outdoor air, but with well water continuing to predominate in localities where adequate ground water is found near the surface. . . .

" . . . with air as heat source some method of storing heat during short intervals" for extreme temperatures.

Friend compares the present status of the packaged type heat pump with the electric refrigerator of the early 1920's and the room air conditioner of a decade later with the belief that despite the interest in the subject, mass production of the heat pump is still in the future.

However, he says, some $8 to $10 million has already been invested in research, development, promotion, sales, and installation of heat pumps, exclusive of $1½ to $2 million invested by utilities. Current rate of expenditure exceeds $1½ million annually, he estimates.

Heat pumps are now located in 39 states and number more than 600, according to data obtained by the joint AEIC-EEI committee, but Friend points out there are probably several hundred other installations not included in the above figure.

Half of the 600 installations are residential, 45% commercial, and 5% industrial with the heat source being water for 53%, air for 36%, and ground coils 7%.

Reviewed also by Friend were the activities of several manufacturers in the field:

Acme Industries—Producing self-contained equipment to transfer heat from a cold fluid to a warm fluid. Available in "stock" sizes from 2 to 15-hp. with larger sizes up to 200-hp. obtainable on special order.

Carrier Corp.—Supplier of equipment for early commercial installations, Carrier is evaluating economic possibilities of heat pump, according to Friend.

Drayer-Hanson, Inc.—Has some 400 units in operation, but no longer builds standardized package units. Will furnish custom-built installations.

General Electric Co.—Plans pilot production of 3 and 5-hp. package heat pumps during 1951. Installed more than dozen self-contained units for test purposes during 1948-49.

Muncie Gear Works—Has many hundreds of units installed throughout country using ground coils and well water. Standardized models up to 25-hp. Establishing distributorships in selected favorable areas.

Servel, Inc.—Had as many compressors in use for heat pumps as all other makes combined by end of 1948. Total nominal capacity furnished for heat pumps through 1950 exceeds 2,100 hp.

Westinghouse Electric Corp.—Will place four or five self-contained package units with sectionalized sub-assemblies using 3 and 5-hp. compressors out for field tests in 1951. Air is heat source.

Worthington Pump & Machinery Corp.—Has supplied compressors for heat pump applications, but has no present plans for package-type units.

York Corp.—Has designs for package 3 and 5-hp. units based on experience with custom-built installations and experimental package test models. Production may start in middle of 1951.

According to Friend, International Harvester has heat pumps under test in the laboratory, but other major manufacturers of air conditioning reportedly are not now engaged in heat pump development.

In reviewing his company's field tests with package heat pumps, Levine of General Electric commented that "actual heat loss in a building is often less than calculated," which, of course, works to the advantage of the heat pump.

"Eight package model heat pumps of the air-to-air type rated at 6-hp. were installed in New England, New Jersey, Ohio, and Texas in such application as stores, utility offices, clinics, and residences," he explained.

"Two 3-hp. compressors were employed and so controlled that one or both compressors could be operated. There was also some auxiliary heat source. Generally, one compressor only would operate as long as the air temperature was above 36° F. From 20° to 36° both compressors would be operating, and below that the auxiliary heat source would be cut in. The switchover was automatic."

As has been previously reported, G-E gathered an elaborate set of records of these test installations by automatically photographing a large instrument panel at frequent intervals on a 24-hour-a-day basis.

Defrosting for these machines was accomplished by means of a water tank built in the heat pump package and heated with a Calrod unit.

UNLOADING COMPRESSOR

Another approach to the heat pump problem was presented by Gonzalez of Airtemp in describing the application of an unloading compressor to a pair of installations in the Philadelphia area.

"The principle of continuous heat delivery of varying rates is well known and is very interesting. In applying this principle to a heat pump a variable capacity compressor can be a major item," he said.

Both intermittent and modulating operation were tested on the two pilot heat pump installations sponsored by the Philadelphia Electric Co., modulating being used 40% of the time, intermittent 60%, explained Gonzalez.

"The coefficient of performance for both systems was essentially the same, averaging 2.61 for the entire winter season. First trials, have shown that the efficiency of the modulating cycle is comparable to an intermittent operation, but it can be improved."

From the man who has "lived" with more heat pumps than anyone else—Smith of Muncie Gear Works—came the statement that the development of properly trained installation and servicemen "gets to the grass roots of the problem."

Smith's implication was that the problem with the heat pump today is not so much one of engineering and production but proper application, installation, and service.

"Proper sizing, proper heat source, proper selling, and proper installation," he said, are paramount requirements for success with the heat pump.

"When we sold our first units," he recalls, "people were afraid, so they operated their systems at 78° F. in order to store heat in case of a failure. This, of course, resulted in excessive operating costs.

"We have now set up factory-trained distributors and expect to establish more. Our plan is to have these distributors install one or two

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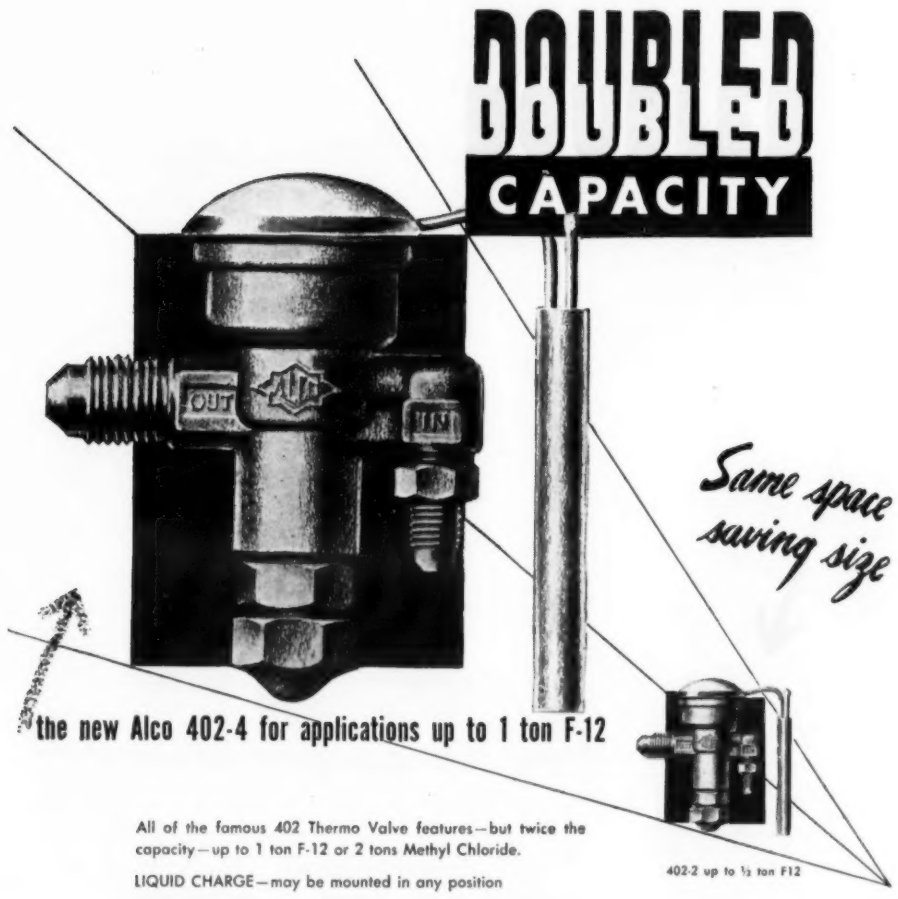

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Symposium Reveals Results of Tests on Use of Heat Pump for Water Heating

(Concluded from preceding page)

heat pumps in their locality and then wait a year to check results before proceeding with any more installations."

Marvair units, according to Smith, have been installed in 38 states, including a unit in "one of the coldest spots in Oregon." The unit there has a c.o.p. of 3.2 operating with 48° F. water as the heat source. The performance figure, he said, applies to the motor and compressor, not the water pump. A c.o.p. of 4 has been obtained in Florida using 70° F. water on the heating cycle, which runs about three months out of the year.

ESTIMATING OPERATING COST

A rule of thumb method being used to estimate operating cost, Smith added, is to figure 1 kwh. per degree day for each 40,000 B.t.u. load.

"Today's market for the heat pump," he also declared, "is in the 20% new home construction, which, with the commercial market is most interesting."

Tests on another important aspect of the heat pump—its use for domestic hot water heating—have come up with results "surprising to a great many people," the symposium was informed by A. W. Ruff of the consulting firm associated with Harvey-Whipple in this project.

Not only does the heat pump water heater perform well in its primary job, but "it's also a pretty fair air conditioner and a good dehumidifier," Ruff said.

Twenty-eight or 30 of these units have been under test for several months now, he explained, using a ⅓-hp. hermetic unit located at the top. The coil is at the very top of the water heater, the condenser being in shape of a hollow shell. Storage capacity is 55 gals.

"It should be recognized," Ruff pointed out, "that the average home today uses 70 to 80 gals. of hot water per day, compared to 40 gals. 10 years ago. The importance of hot water in the home has greatly increased. People today also want the water temperature at just the right point."

The heat pump water heaters under test have shown a warm-up time of 5 hours to raise water temperature from 62° to 143° F. Maintaining an average temperature of 121° F., they've had a c.o.p. of 2.95, according to Ruff.

Comparing this with the conventional resistance type electric water heater, he indicated the latter's kilowatt consumption is three times that of the heat pump.

"As for its cooling characteristics, the heat pump water heater with its ⅓-hy. unit is roughly equivalent to a ½-hp. room air conditioner, and as a dehumidifier it can remove 15 to 20 gals. of moisture a day from the air," Ruff revealed.

A possible disadvantage was that the ⅓-hp. size may not have enough recovery capacity, he added.

When the symposium session was thrown open for general discussion several questions both specific and general in nature were asked of the participants, in addition to some comments being made from the floor.

Reactions of one individual who lives in a house which depends on a heat pump were presented by H. V. Gardner, in whose home is one of the experimental General Electric package units.

He's found it quite satisfactory, declaring that "although the performance curve shows there's a lag at around 0° F., we haven't noticed any discomfort at this temperature."

Among the questions was this: "When you make a heat pump installation, do you have to dig a new well or can you use an existing one as the heat source?"

"Usually the water requirements for a heat pump are greater than the average shallow well can supply," replied Smith of Muncie Gear Works. "In rural areas, however, many heat pumps have been put on existing wells, but in urban areas you don't usually have wells available. Often two wells are used."

Another question: "Is it practical in an industrial plant to recover heat where a tremendous amount is wasted, as in a steel plant?"

"Well, you could possibly bury coils in a slag pile, say, and pump a fluid through them to recover heat, but this presents several problems," commented Levine of G-E.

WHAT'S COST OF WELL?

"How does the cost of a well added to that of the heat pump unit compare with a conventional heating plant?"

"The cost of a well is just what it is. It varies so much," answered Smith. "Around Muncie, Ind., it costs $3 per foot for a 4-in. well. My own, which is 160 ft. deep, was dug at a cost of $500. That is one of the problems, and it does limit the places where you can install heat pumps. I would say that where you can hit water 150 to 200 ft. deep for a domestic installation you aren't out of line. On a commercial installation you can afford to go places to get water."

Some further comments on air-to-air and ground coil systems were contributed.

"We believe there is some margin over the usual calculations on air-to-air systems," declared Levine of G-E. "In some of these homes with the experimental heat pumps we've also had oil-fired space heaters for reserve or auxiliary heat. Indications are that there won't be as much call for these as might be expected."

Commented Friend: "There is a discrepancy between calculations and actual heat losses. Sunshine, wind, etc., are taken into consideration. Calculations involving ground coils are extremely complex. A critical period may occur after, say, a 10-day cold period with the ground frozen but no moisture. If there is a dearth of moisture, the heat transmission rate falls off, which may cause trouble. However, more trouble is anticipated with ground coils in summer because the ground can't absorb enough heat."

Question: "What about having too many ground coils or wells concentrated in a given area?"

Gonzalez: "There is an effect in the case of wells used for air conditioning, the wells on the downstream side being affected. From the residential standpoint, however, with the spacing between houses that we have it's very hard to see how one ground coil would interfere with another."

Added Smith: "We don't seem to have much trouble. In Muncie there are seven Marvairs in two blocks and no damage has been shown. There's going to have to be a lot more heat pumps to cause any damage."

"Have any effects been noticed on lawns or shrubbery with ground coils?"

No such difficulty has been noted, it was agreed, Friend pointing out that "a survey of 40 ground coils shows that sunshine, rainfall, etc., completely obscured any effects that ground coils might have had."

Attempts of one organization to used finned ground coils placed near houses and garages did result in bulges and expensive lawsuits, it was indicated.

Another on ground coils: "Heat is being accumulated in the ground during summer operation of a heat pump system. What is the magnitude of this heat accumulation in relation to the winter heating load?"

Answered Friend, "How long is a piece of string? Heat quantities will vary so much, probably over a range of 20 to 1 to cover all aspects. It's hard even to estimate this when you know the calculated heat loss on the house."

EFFECT OF HEATER UNIT

Regarding the heat pump water heater this question was asked: "What increase is there in the winter heating bill due to the cooling effect of the water heater unit?"

"That question is under consideration now," Ruff admitted, "but it doesn't take much. The heat leakage from the average furnace is much greater than the cooling effect of the unit. There is plenty of waste heat available."

Also contributed to the symposium by E. W. Gay was a description of a "regenerative heat pump" which stores solar heat in water. He concluded his comments with a remark that in some ways pretty well sums up the heat pump subject—

"Heat from a heat pump is no different from oil or gas, but the summer cooling is wonderful."

Few Last-Minute Changes Bring New Alter Catalog In Line with Price Freeze

CHICAGO—All prices in its new catalog now being distributed are in compliance with the price control regulations of Jan. 26, The Harry Alter Co. here has announced.

The company said the catalog is the first published in the refrigeration industry with the latest prices on parts.

"The catalog was in preparation for several months," the company pointed out, "but due to the constantly increasing market, it was not possible to set a deadline for publication until the price regulation law was enacted.

"A few last-minute changes were consolidated on one page in the yellow-color section, bringing the catalog up-to-the-minute on all price changes."

The catalog is now being mailed to all servicemen and dealers on Alter's mailing list. Copies may be obtained by writing on company letterheads to The Harry Alter Co., 1728 S. Michigan Ave., Chicago 16, Ill.

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Rockford, R. Cooper, Jr., Inc., 502 Cedar St.
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Indianapolis 4, Square Deal Supply Co., 821 N. Illinois St.
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Davenport, White Refrigeration Supply, Inc., 818 East River
Des Moines 14, White Refrigeration Supply, Inc., 5th and Crocker Sts.
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MARYLAND
Baltimore, Hajoca Corp., 2740 Loch Raven Rd.
MASSACHUSETTS
Boston 15, A. E. Borden Co., Inc., 176 Brookline Ave.
MICHIGAN
Detroit, Johnston Refrigeration Sales Co., 1420 Holden Ave.
Grand Rapids 2, Clement Electric Dist. Co., 223 Erie St., N. W.
MINNESOTA
Minneapolis 1, Vincent Brass & Copper Co., Inc., 100 N. Second St.
MISSOURI
Kansas City 8, Refrigeration Equipment Co., 2400 Grand Ave.
St. Joseph, Refrigeration Equipment Co., 819 S. 8th St.
St. Louis 3, Henry Weis Jr., Inc., 1919 Washington Ave.
NEBRASKA
Lincoln 8, Wickham Supply Co., Inc., 239 N. 11th St.
NEW JERSEY
Camden, Hajoca Corp., 1687 Haddon Ave.
Newark 2, W. I. Freeman & Co., Inc., 69 Central Ave.
NEW MEXICO
Albuquerque, McCombs Refrigeration Supply Co., 322 N. First St.
NEW YORK
Albany 1, A. Wayne Merriam Inc., Maplewood Ave. Ext., P. O. Box, 750 Stop 39, Schenectady Road
Brooklyn 16, The Capson Co., Inc., 106-108 Rogers Ave.
Flushing, The Capson Co., Inc., 40-16—149th Place Queens
New Hyde Park, The Capson Co., Inc., 1014 Jericho Tpk., Nassau
New York 7, Paramount Electrical Supply Co., Inc., 19 Beekman St.
Rochester 4, Genesee Refrigeration Supplies, Inc., 31 Spring St.
Syracuse 1, Gould-Farmer Co., Inc., 1020 W. Genesee St.
NORTH CAROLINA
Charlotte, Walker Martin, Inc., 451 Atonda Ave.
Greensboro, Walker Martin, Inc., 827 Raleigh St.
Raleigh, Walker Martin, Inc., 840 Poole Ave., Salisbury St. Ext.
OHIO
Akron 8, Davey Sales Co., 170 South Forge St.
Cincinnati 2, Merkel Bros. Refrigeration Parts, 901 Bway.
Cleveland 8, Debes Refrigeration Supply Co., 1249 East 105th St.
Columbus 3, Mason Supply Co., 289 Cleveland Ave.
Dayton 2, Allied Supply Co., Inc., 359 W. Monument Ave.
OKLAHOMA
Muskogee, K and M Supply Co., 204 South 3rd St.
Oklahoma City 1, Jones-Newby Supply Co., Inc., 129-133 N. W. 23rd St.
Tulsa 3, K and M Supply Co., 208 North Denver Ave.
OREGON
Portland 15, Rigby Refrigeration Co., 2232 E. Burnside St.
PENNSYLVANIA
Lansdowne, Hajoca Corp., 130 E. Baltimore Ave.
Philadelphia 1, Hajoca Corp., 31st and Walnut Sts., P. O. Box 7319
Philadelphia, Hajoca Corp., 2nd and Erie Ave.
Pittsburgh 12, Orr Inc., 1228-30 Brighton Road
Pittsburgh, Orr Inc., 5976 Centre Ave.
Reading, Hajoca Corp., 2nd and Grape Streets
Williamsport 34, Lowry Electric Co., Inc., 643 Elmira St.
SOUTH CAROLINA
Columbia 1, Perry-Mann Electric Co., Inc., 901 Taylor St., Seaboard Park
TENNESSEE
Knoxville 5, Leinart Engineering Co., 412 East 5th Ave., P. O. Box 508
Memphis 3, Wallace Johnston Appliances, Inc., 760 Union Ave.
Nashville 3, J. B. Thomas Co., Inc., 1902 Church St.
TEXAS
Beaumont, Standard Brass & Mfg. Co., 706 Milam St.
Dallas 2, Electrical Supply Corp., 1101-07 McKinney Ave.
El Paso, M & M Refrigeration & Electric Supply Co., 403 Montana St.
Houston, Standard Brass & Mfg. Co., 2018 Franklin Ave.
Port Arthur, Standard Brass & Mfg. Co., P. O. Box 1469
San Antonio 5, Westbrook Co., 315 South Main Ave.
UTAH
Salt Lake City, Refrigeration Distributors Corp., 132 South Second West
VIRGINIA
Richmond, Hajoca Corp., 1208 West Marshall St.
Roanoke 5, Southern Refrigeration Corp., 1850 S. Jefferson St.
WISCONSIN
Milwaukee, Vincent Brass & Copper Co., Inc., 1025 N. Water St.

Remember! Over 1 million G-E condensing units have been built. This acceptance means greater profits for you! Let the famous General Electric name help you sell.

Saturday Evening Post advertising backs up your sales story.

"...Lower electric bills...greater dependability since we installed General Electric Refrigeration Machines!"
refrigeration machines
GENERAL ELECTRIC

You can put your confidence in—

GENERAL ELECTRIC

Variety of Air Conditioning Accessory Items Shown at Philadelphia

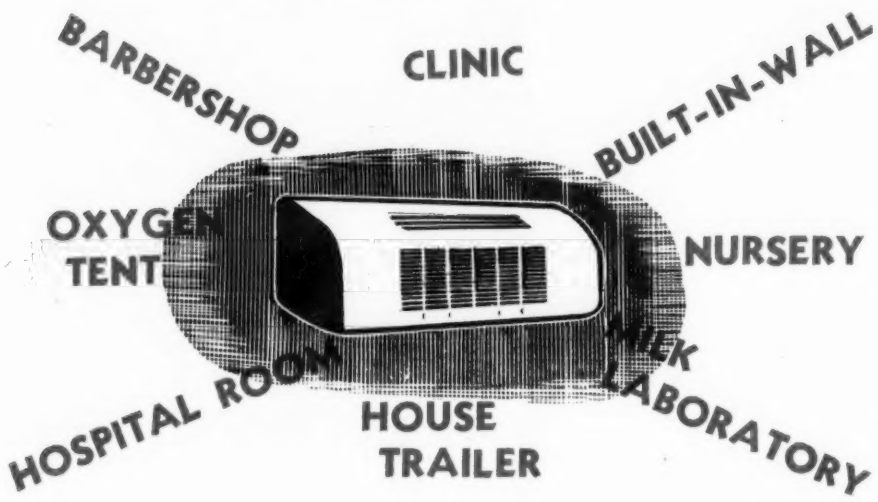
Earl Vallee of A-P Controls Co., B. T. Carroll of New York, and Nelson Port of Boston in front of the colored oil field panorama that served as a background for the display of A-P line of air conditioning and heating controls at the recent Heating & Ventilating Exposition in Philadelphia.

"It comes out nice and even," says Tom Hughes of Air Devices, Inc., as he points to an operating model of a ceiling-type air diffuser made by the firm. Streamers attached to the diffuser indicated course of leaving air.

BIG NAMES, BIG MACHINE: Paul Christensen, national president, and M. C. Turpin, secretary, the American Society of Refrigerating Engineers (facing camera) appropriately enough are found looking over a big Frick refrigerating machine, as W. O. Kline of Frick (with back to camera) talks to another visitor.

Can You Top These?

Look 'Em Over!



EVERY ONE

Represents an outstanding and unusual application of room cooler air conditioning that has previously been publicized in the NEWS. All would make good logical candidates for the $100 first prize in the room cooler division of the AIR CONDITIONING & REFRIGERATION NEWS contest for the most unusual air conditioning application.

Do you have an installation in your files that could top these for unique and unusual qualities?

If you have—and every air conditioning contractor or dealer has at least one "pet" application in his files—you have an even better chance of bringing home the $100 first prize—or one of the 75 big prizes offered.

Entries in this contest will be given full publicity by the NEWS

BECAUSE—What may be an unusual application for air conditioning today can open up an entirely new field for exploitation by the industry tomorrow.

The 1951 air conditioning season is just ahead. It promises to be the biggest and best yet—despite government restrictions.

So, give your industry—and yourself—a big boost by sending in your contest entry today.

ENTER NOW!

THE AIR CONDITIONING & REFRIGERATION NEWS

$1,000 CONTEST

for the Most Unusual Air Conditioning Application

THREE DIVISIONS

1. Packaged Unit 2. Room Cooler
3. Central System

75 PRIZES (25 In Each Division)

FIRST $100 SECOND $50 THIRD $25

Next 10 Best Entries $10.

Next 12 Best 1 Copy of "Both Feet on the Ground" by George F. Taubeneck

JUST FOLLOW THESE SIMPLE RULES

1. Write brief, complete description including:
   Customer's name, address.
   Type, name of air conditioning equipment used.
   What job equipment is intended to do.
   In what way is application unusual?
   What were installation problems, if any?
   How was sale made?
2. Submit picture of installation to show unusual aspects.
3. Mail picture, description to
   CONTEST EDITOR,
   AIR CONDITIONING & REFRIGERATION NEWS,
   450 W. Fort St., Detroit 26, Mich.

All air conditioning contractors, dealers, and their employes are eligible to enter.

Duplicate Prizes Will Be Awarded In Case of Ties

Judges Decisions Will Be Final

CONTEST DEADLINE MIDNIGHT MARCH 1, 1951

AIR CONDITIONING & REFRIGERATION NEWS

ATTACH THIS COUPON

AIR CONDITIONING & REFRIGERATION NEWS
450 W. FORT ST., DETROIT 26, MICH.

Here is my entry in the unusual air conditioning application contest.

Picture is: attached ☐ sent under separate cover ☐

Please enter me in the following division:
Room Cooler ☐ packaged unit ☐ central system ☐
(As many separate entries may be made as desired.)

Name .....

Firm .....

Street & No. .....

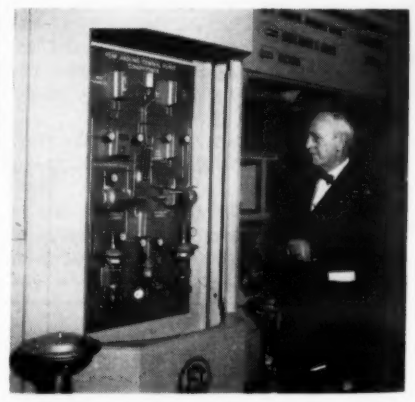
City ..... *State* .....

Please Check ☐ Distributor ☐ Dealer ☐ Contractor ☐ Service ☐ Other .....

2-12-51

450 W. Fort St., Detroit 26, Mich.

Dick Lavaty and Hal Mitchler (left) explain to Betty Rodes the workings of a Marsh type 101 master gauge, displayed among a panel of gauges and instruments for use in refrigeration service work.



A panel of controls representing a complete control setup for a year-round central-type air conditioning system was a part of the Johnson Service Co., controls manufacturer, display, being viewed here by W. S. Wagner of the Philadelphia Coke Co.

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Evaporative Condensers 3 TO 20 TONS

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Insulation & Panel Heating:

Experiments Show That Some Type Is Needed for System In Floor

PHILADELPHIA — "It is evident that some type of insulation is required with floor-type panel heating if the operating cost is to be kept at a reasonably low value."

This the American Society of Heating & Ventilating Engineers was told at its 57th annual meeting here during presentation of a paper describing a test installation.

EDGE AND REAR LOSSES ABOUT 30%

"Edge and rear losses [of the floor panel] were found to agree very closely on all tests and to be of the order of 30% of the total energy supplied to the heating system," declared the three authors of the paper —Prof. F. W. Hutchinson of the University of California; D. L. Mills, research and development engineer, Revere Copper & Brass, Inc.; and L. J. LaTart, also of Revere.

"Over a two-year period tests were conducted on two floor-type panel heating systems installed in regularly occupied rooms of an industrial building. Both systems used ¾-in. sinuous coil copper tube on 9-in. centers and in each case the coil was embedded in a 4-in. concrete slab poured over a 6-in. gravel fill," the authors state.

"No insulation was provided either under or at the sides of the slab, or of the structure, and in each case the heated section of the floor was less than the total floor area. Cellular insulation, ¾ in. thick, separated the heated from the unheated floor sections."

This building had been made available three years ago and was 25 by 60 ft. with an 11 ft. 6 in. ceiling. Hundreds of thermocouples and necessary controls and testing instruments were installed to permit an accurate study of the heating system, even though the building was designed for regular occupancy.

Most of the tests were run on a sinuous coil floor panel taking up 118 sq. ft. of surface in a room having 220 sq. ft. of floor area. The coil was ½ in. from the floor surface.

Some tests were also made on another panel of the same size and construction, differing from the first only in that there was 1 in. between the floor surface and the top of the imbedded coils, instead of ½ in.

LOSSES GREATER THAN THOUGHT

"As tests of the actual system proceeded, it became evident that losses of heat either through the floor slab or around the periphery were very much greater than indicated by common belief," the authors state.

"During the first heating season that the system was in operation losses were estimated at from 25 to 30%, but data from these early tests was not considered sufficiently conclusive to justify publication."

Further tests evidently confirmed these first figures.

RATING OF PANELS

"Much disagreement has existed as to the rating of floor-type heating panels, but the present results seem to indicate that ratings of actual panels do not appreciably differ from ratings obtained in the laboratory under controlled conditions.

"For a panel designed to operate at surface temperature of 85° F. in a room with an air temperature of 70° F., both laboratory and field tests now show that the total upward heat transfer (the panel rating) will be from 30 to 35 B.t.u./hr./sq. ft.

"There have been many expressions of opinion to the effect that ratings much higher than this occur, but so far as the authors have been able to determine there has never been any published data, obtained under precise test conditions, to substantiate belief in a rating higher than 35 B.t.u./hr./sq. ft. for an 85° F. panel in a 70° F. room."

The authors also reached the conclusion that "the film coefficients of heat transfer calculated from test data agreed very closely with the values obtained by other investigators and suggest that an acceptable design value of combined (radiation and convection) film coefficient for floor heating panels is 2.1 B.t.u./hr/sq. ft./°F. temperature difference from panel surface to air."

Questioned as to why only 50% of the floor in this test installation was equipped with heating coils, the authors explained that the size of the floor slab more closely approximated normal installations when only half was used.

Cauhorn Separates Home And Commercial Work

DETROIT — Separating the residential and commercial phases of his heating and air conditioning business, A. V. Cauhorn, president of A. V. Cauhorn Co., has named Louis Marquard as general manager of the Home Heating Dept., and Thomas Adams as general superintendent of the Commercial & Industrial Dept.

The Home Heating Dept. will handle all types of residential installations, including home air conditioning.

The Commercial & Industrial Dept. handles such varied projects as single heating unit installations in small buildings and extensive projects such as the one now under way in the Highland Park warehouse of Sears, Roebuck & Co.

This installation includes 100 individually controlled overhead steam units fed by two large steam boilers, with underground storage for 20,000 gals. of oil.

Electrostatic Precipitation Phenomena— 'It's Still an Art, Not a Science'

PHILADELPHIA — "No single theory will explain all the phenomena of electrostatic precipitation —it's still an art, not a science," declared Eric A. Walker, head of Pennsylvania State college's electrical engineering department, at the 57th annual meeting of the American Society of Heating and Ventilating Engineers here.

Walker presented a paper on a subject prepared by himself and John E. Coolidge, also of Penn State, which attempted to explain some of the observable effects of electrostatic precipitation and reported on experiments they had conducted.

"Simplest type of a precipitator consists of a wire and concentric cylinder with a high voltage maintained between the wire and cylinder to produce a voltage discharge," Walker explained.

"The dust-laden air is passed through the cylinder where the dust is charged by the corona discharge and is then transported by the associated electric field to the cylinder where it can be collected. The dust is removed by mechanical rapping or flushing with an appropriate fluid."

The same principle of operation is employed in the widely used wire flat-plate, he indicated.

One of the puzzling aspects of this problem, Walker pointed out, was that precipitation of dust on an electrically energized plate can be obtained without supplying any voltage to a discharge wire.

This action is apparently caused by friction in the dust which imparts an electrical charge in the particles. The particles so charged are then attracted to the collector plates.

Investigations of this, Walker added, led to the problem of "reentrainment," that is, dust particles collected by the plates are released to the air stream again.

What apparently happens here, he said, is that the dust particles assume the polarity of the plate when they're first entrained. As a result there is a repelling electrical force between the plate and the dust particles. If this force is greater than the mechanical forces holding the particles to the plate, they'll be again caught in the air stream.

The particles will be attracted to the opposite plate where the same action may take place. In this way the particles could bounce back and forth between the two plates throughout the length of the precipitator.

"Humidity seems to be an important factor in precipitation, too," Walker said. "It has a pronounced effect on gypsum and some effect on fly ash."

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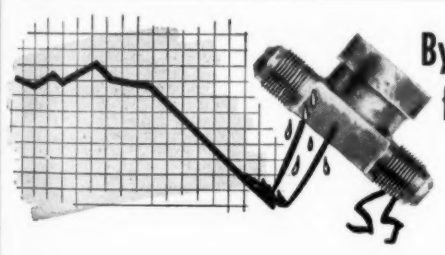
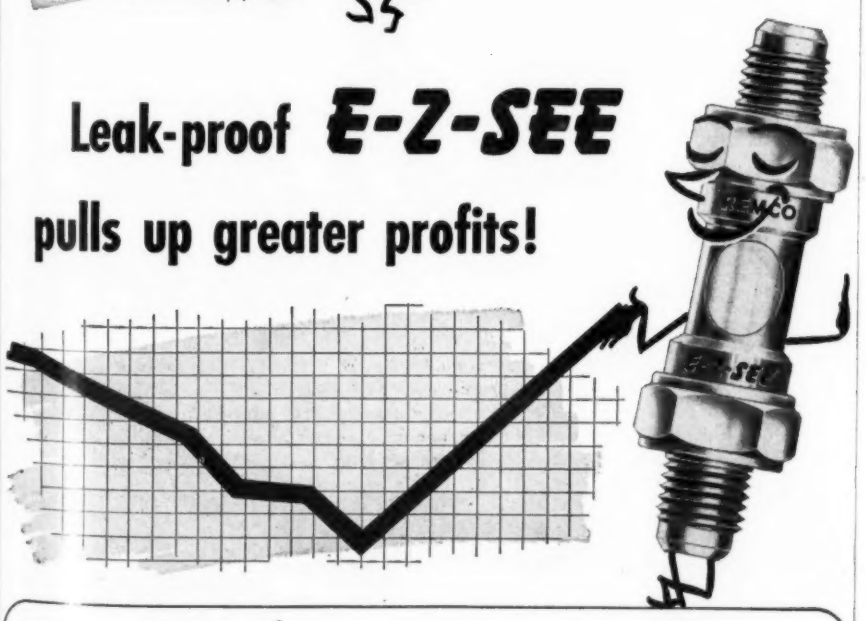
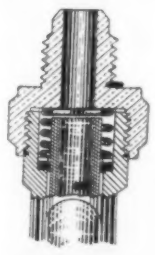


By eliminating losses from leaking Liquid Indicators

Leak-proof **E-Z-SEE** pulls up greater profits!



Here's Why!



Note how in E-Z-See, unlike in conventional liquid indicators, spring-compensated leak-proof gaskets and 'floating' high-pressure Pyrex glass assure you the following advantages: (1) Perfectly Safe . . . glass is protected from damage by unique slotting arrangement — safe at pressures up to 500 PSI. (2) Positively leak-proof . . . can't leak because springs automatically maintain just the right force to form a positive seal around the glass. (3) E-Z-to see through . . . both sides of the body are open to let in light through the tubular high-pressure gauge glass. No more losses from leaking—here truly is the 100% answer to the industry's demand for a fool-proof liquid indicator.

E-Z-See available in connection sizes ¼", ⅜" and ½"—in male flare both ends; one end female and one end male; or sweat connections to permit soldering without disassembling.

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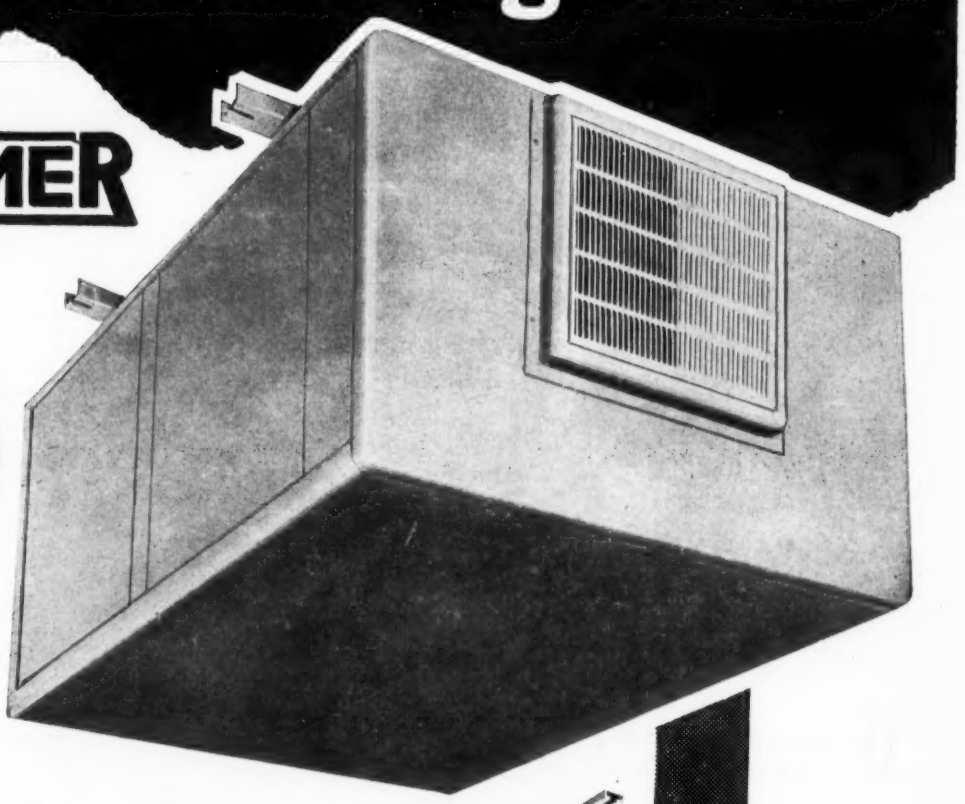
Air Conditioning Units

by **KRAMER**

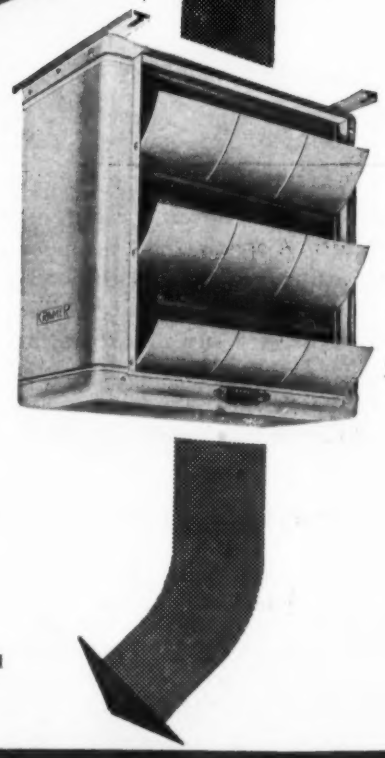


The Kramer Air Conditioning Unit . . .

Means a tremendous saving in valuable floor space —attached to the ceiling, out of the way. Sturdily constructed and efficiently designed to make all parts easily accessible. Hot water or steam coils and humidifier can be furnished to make it readily adaptable for year-round use. Used with or without ducting. Available in three to ten ton capacity. Here is an air conditioning unit that offers more to you and your customers.

The Kramer Comfort Cooler . . .

Means low cost comfort cooling. It releases precious wall and floor space. A replaceable filter is furnished. Adaptable to large installations by using two or more units. The cooler assures long, quiet, trouble-free service with a slow speed, totally enclosed, rubber mounted motor. It will pay to check these outstanding advantages. Kramer coolers mean better service for your customers, more profits for you!



WRITE FOR BULLETIN AC-171

KRAMER TRENTON CO. *Trenton 5, N. J.*

THERMOBANK - COOLMASTER - RADIAL UNITS - PANEL UNITS - CUBERS - FINNED COILS - BARE TUBE COILS - HEAT INTERCHANGERS - CONDENSERS Air Cooled, Water Cooled, Evaporative - WATER COOLING EVAPORATORS - BLAST COOLING COILS - BLAST HEATING COILS

Geo. Murphree Buys Out Partner's Share In Firm

DETROIT—George Murphree, veteran Detroit service contractor, has announced his purchase of the interests of F. J. Allen in Refrigeration Maintenance, Inc., contracting firm.

Murphree and Allen had previously purchased the company from its Chicago owners in 1949, having jointly managed the firm since it was organized in 1940.

Associated with the industry for many years, Murphree started with the Nizer service department in 1926. Service experience also followed with Kelvinator and Copeland, and he was a partner in the first independent service firm organized in Detroit. From 1936 to 1940 he was service manager for Universal Cooler Corp. in Detroit.

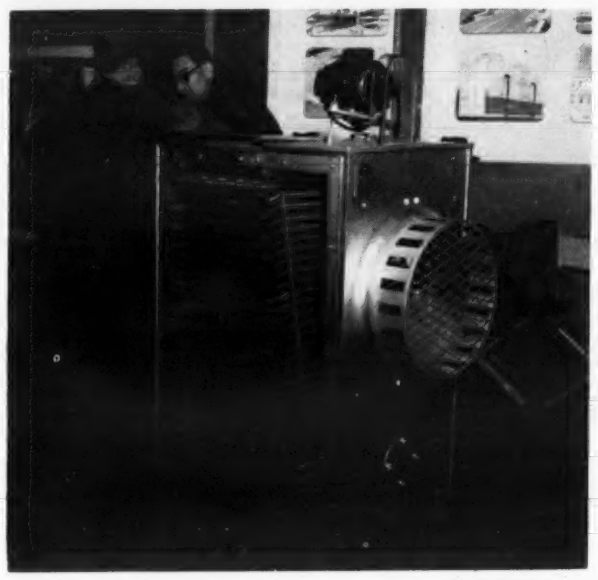
He is a former president of the Refrigeration Contractors Association of Detroit and has also served on the Refrigeration Examining Board of the City of Detroit.

Harry Alter Issues Dependabook No. 154

CHICAGO — The Harry Alter Co. has just published its new refrigeration parts and supplies catalog—"Dependabook" No. 154—for Spring and Summer, 1951. Over 9,000 items are illustrated, described, and priced.

Copies may be obtained by writing on firm letterheads to The Harry Alter Co., 1728 S. Michigan Ave., Chicago 16, Ill., or 134 LaFayette St., New York 13, N. Y.

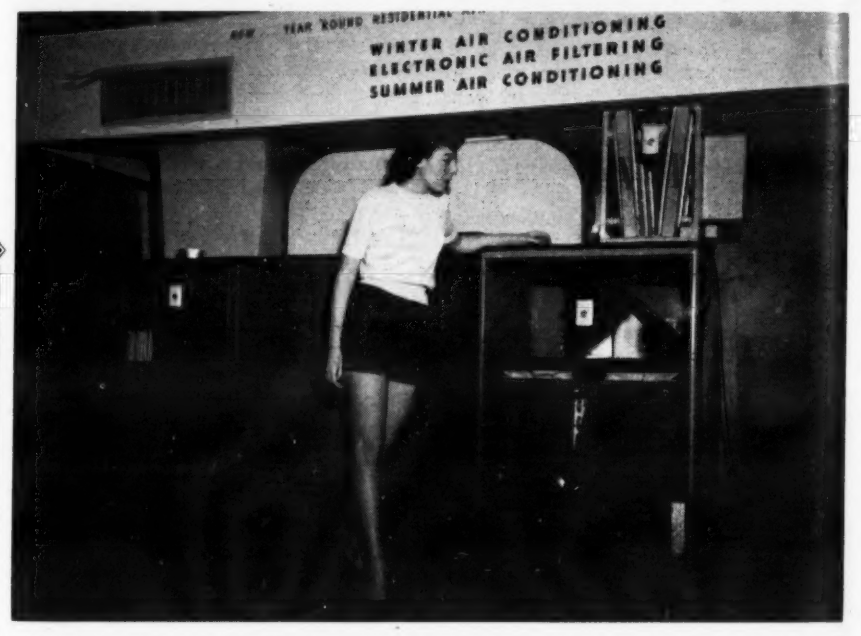
At the Phila. Exposition the Spotlight Focused On New Products for Home, Commercial Use



COMPACT: Is the word for the Marley Co., Inc.'s 5-ton cooling tower which is pictured here. Some idea of the compactness is possible by comparison with the size of the men standing behind it.

The pictures on these two pages plus those on page 20 of this issue complete the photographic coverage by AIR CONDITIONING & REFRIGERATION NEWS of new products and developments shown at the recent Heating & Ventilating Exposition in Philadelphia. The first batch of pictures from the show appeared in the Feb. 5 issue.

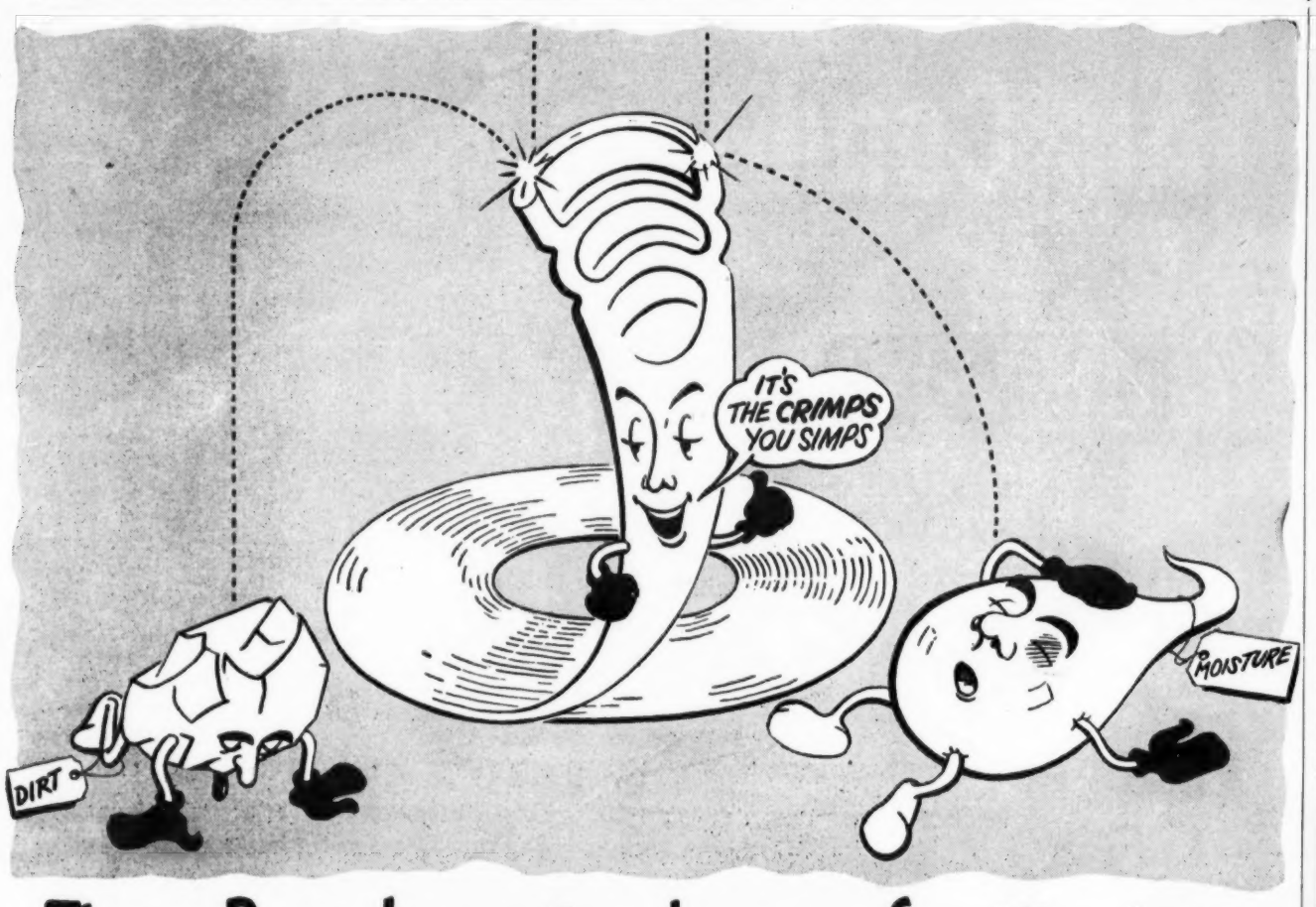
SMALL AND LARGE: Package air conditioners were displayed by Viking Mfg. Corp. The model RC-150 ½-hp. room air conditioner occupies the attention of Hugh Martin, Martin-Johnson Co., Dallas. In the left background is Viking's completely self-contained year-round package air conditioner for commercial or home installation.



FIRST: For American Radiator & Standard Sanitary Corp. is this summer air conditioner, on which Ruth Gillies is leaning. Equipped with two 1-ton hermetic refrigerating machines, it was shown hooked up in conjunction with a Sunbeam warm air furnace, to provide the first year-round air conditioning system to be introduced by the company.

Occupying a central spot in the Sturtevant Div. of Westinghouse Corp. exhibit was the new model SU-81 packaged air conditioner, employing a 7½-hp. condensing unit which is said to develop 8 tons of cooling capacity. Unit handles 3,200 c.f.m. Controls for temperature regulation and fan operation are under the nameplate. Isolated frame construction is claimed to assure quiet operation.

V. Porta, G. Roepke, and L. C. Pellegrini (at left), and C. D. Marlo and Walter B. Moses, Jr. (at right) flank Marlo's model CT all-stainless-steel cooling tower of 7½ tons capacity.



These Pests haven't a chance of getting into..

REVERE DRYSEAL refrigeration tube

●Dryseal gives dirt and moisture the bounce at the factory. A special, precise, mechanical double-crimp seal is made at each end of the tube when it is manufactured. This means Dryseal is delivered to you bone-dry and free from dirt. The seal is made in such a way that the diameter of the tube does not change, which permits Dryseal to be passed through any opening large enough for the tube itself.

While Dryseal may be stubborn about keeping out dirt and moisture it's a soft touch when it comes to bending. The soft temper of the copper used in Dryseal allows you to make the most intricate bends by hand. And its ductility and soft temper make it extremely easy to flare for compression fittings without danger of splitting. Economical tube sizes range from ⅛" to ¾" O.D.

And, for your greater convenience we have just recently brought out Dryseal in a nifty-50 one-coil carton. This carton, which has been attractively designed for easy identification in stock, contains one 50-foot coil of Dryseal . . . is easier to handle, light weight, economical.

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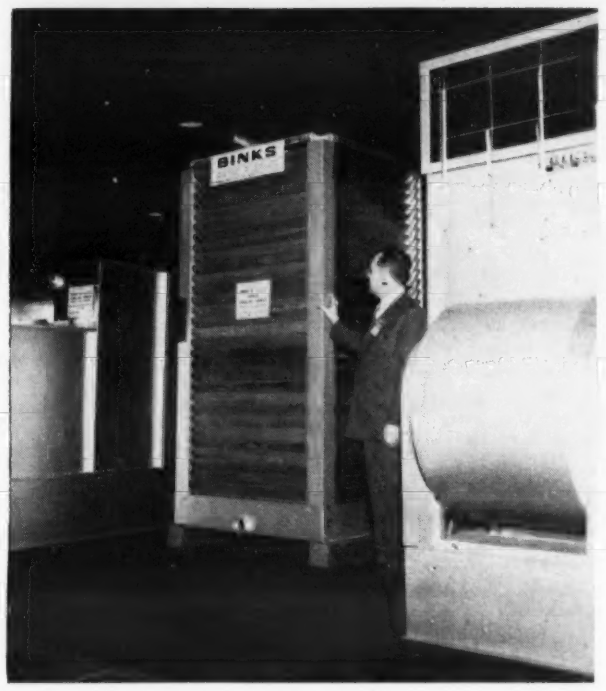
[illegible] MEMORIAL DR., S.E. • ATLANTA, GA.

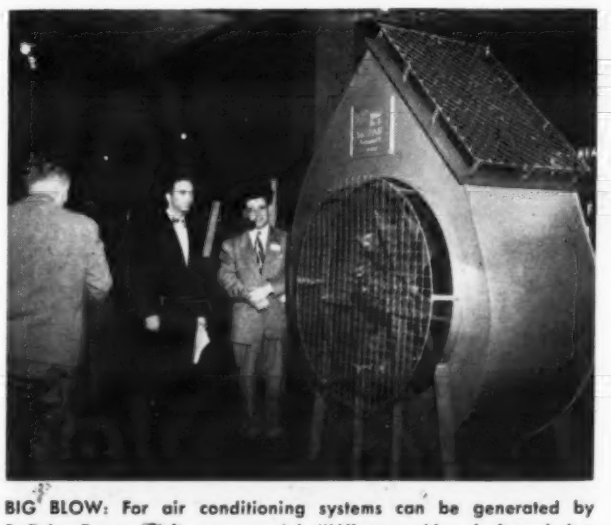
Visitors to the Heating, Ventilating Show Stop for Closer Look at New Items



SPRAY OR DRY-FAN: In cooling towers, Binks Mfg. Co. offers both types. A. G. Stacy stands with 9-ton spray-type cooling tower to give size comparison. At left is a 21-ton dry-fan type and in right foreground part of a 10-ton model is shown.

ADVANCE SHOWING: Miss Shirley Parson of Quiet Heet Mfg. Corp., gave show visitors a personal preview of the company's new 1951 room air conditioner which is just getting into production. Samples of this ¾-hp. unit should be available in March, she said. Distinctive features are the split grille, recessed control knobs, and centered name plate. The unit is said to have an ASRE rated capacity of 8,650 B.t.u./hr.

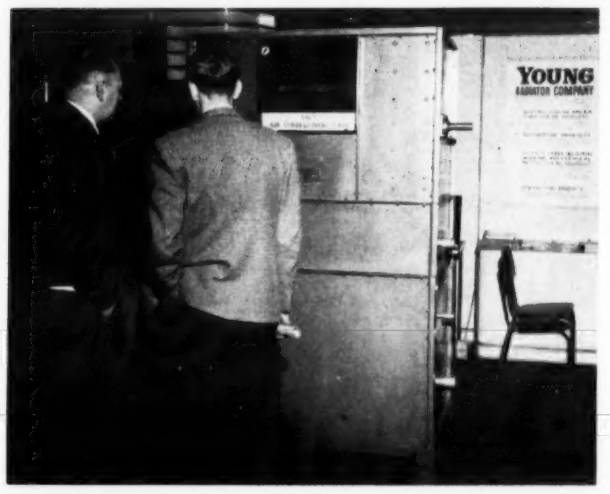
ADJUSTABLE VANES: Are a feature of this McCord Corp. vertical unit heater, with R. H. McGeorge demonstrating the adjustable vane control feature.



BIG BLOW: For air conditioning systems can be generated by Buffalo Forge Co.'s new model "LL" type No. 6 fan, being inspected here by Dewey Listino, Ardmore, Pa., and W. H. Holt of Buffalo Forge.

NO STRAIN: Says Sally Crane in holding a sizable block of lightweight Foamglas insulation as Robert F. Quinn of Pittsburgh Corning Corp., which makes the product, tells her it is used for insulating purposes in all types of construction, and for pipe insulating purposes.

THE DIRT STOPS THERE: W. R. Thomas (center) of Owens-Corning Fiberglas Corp. tells Betty Rodes in explaining the air filtering action of Dust-Stop filters, as F. B. Graper looks on.



Ready for the connection to heating and cooling supply lines is this Young Radiator Co. model "YAC" air conditioner, for use in central-type air conditioning applications.

CHATTERING ABOUT VALVES: In the Detroit Lubricator Co. booth, "Spike" Thorndyke (with glasses) explains one of his company's refrigeration valves to Thomas H. Hart of Atlanta. On the table in the foreground is a display of Detroit thermostatic and automatic expansion valves. By the group in the background are Detroit valves and controls for oil heating.

Display This Flag in Your Store

Coolair TRADE MARK

And Watch YOUR Summer Profits Soar!

With Low-Cost Cooling Folks Will Buy!

The complete line of Coolair Breeze Conditioning units means summer cooling within the financial reach of almost every prospect. There are small window units, single and twin attic package units and home, commercial and industrial units up to 9′ blade diameter—a unit for every cooling job!

THIS SALES PLAN BOOSTS YOUR PROFITS HIGH!

1. Valuable Franchise
You are guaranteed a market area large enough for excellent profit opportunities.

2. Sales Training
When you become an authorized dealer, your personnel will be trained under factory supervision. Your profits start in a hurry!

3. New, Hard-Hitting Advertising and Promotion
Up-to-the-minute Coolair advertising and promotion helps pave the way for profitable sales. Factory even sends direct mail to YOUR prospects!

This unique Coolair proposition for 1951 is a money-maker you can depend on. Don't delay—mail this coupon NOW! No obligations.

AMERICAN COOLAIR CORPORATION
Leaders in Air Cooling for 23 Years

Dept. AC-21, American Coolair Corporation
Jacksonville 3, Florida

Please RUSH us more information about the Coolair proposition for 1951. We are interested in ( ) a dealership, ( ) a distributorship.

NAME_____

TITLE_____

FIRM_____

ADDRESS_____

TOWN_____

ZONE_____ STATE_____

Manning Covers K.C. Area for Kramer Trenton

TRENTON, N. J.—Kramer Trenton Co. has announced the appointment of Thomas J. Manning to its sales organization to cover the Kansas City, Mo., area.

T. J. Manning

Manning is a graduate mechanical engineer from the University of Kansas, class of 1942. After serving four years in the U. S. Navy as an aviation engineering officer, he was employed by the Air Conditioning Department of General Electric Co., Bloomfield, N. J.

After a year in the Application Engineering Section, he was sent to the Kansas City district office where he served as sales engineer. Manning resigned from General Electric to represent Kramer Trenton, and will cover the state of Kansas, and western half of Missouri.

Ramsay Handles B & G Products In Pittsburgh

CHICAGO—The Ramsay Pump & Supply Co. of Pittsburgh has been appointed industrial representative for Bell & Gossett Co. products in the Pittsburgh area, reports R. E. Moore, vice president of B & G.

The Ramsay organization maintains sales and warehousing facilities in Pittsburgh, with headquarters at 1701 Kennan building.

Refrigeration Problems

and their Solution

by Paul Reed

For Service and Installation Engineers

Paul Reed

Dewpoint Indicator

In recent articles in this column, dewpoint temperatures of systems have been frequently referred to, as they are the temperatures that govern the maximum amount of moisture vapor in a system before free water starts to form. Moreover, they govern the *pressure* of the moisture vapor in the system.

So a dewpoint thermometer can be used to good advantage. Moreover, by referring to the saturated steam tables, the dewpoint thermometer can be used instead of a vacuum gauge for the very deep vacuum.

Frank Carter of Detroit Lubricator, describes how a dewpoint thermometer can be easily and cheaply made, but gives original credit to M. B. ("Mike") Goddard of Carrier's Chicago branch.

It consists essentially of a wet-bulb type thermometer inside a closed glass test tube that, by means of a tubing connection, can be connected to the refrigerating equipment. Since, at the saturation conditions, wet-bulb and dewpoint temperatures are the same, the temperatures shown on the thermometer are the dewpoint temperatures of the vapor in the system.

The test tube containing the thermometer *must* be well insulated except for a small window on one side so that the thermometer can be read. In this way, the thermometer will read the dewpoint temperature of the water vapor in the system, and by using the steam tables the corresponding vacuum may be determined.

Fig. 1 shows one method of constructing the dewpoint thermometer by encasing the insulated test tube in a second and outer test tube. This method simplifies the sealing of the insulation against moisture from the surrounding air condensing on the cool inner tube and thus wetting the insulation.

The copper tube is of course connected to the system whose dewpoint is to be determined. Fig. 2 shows another method in which a metal case is used instead of the outer test tube. In this method, an opening must be left in the metal case and the insulation sealed around this window opening, as well as the top of the metal case.

This figure also shows a wick on the thermometer bulb. This wick allows for more variation in water level than if the thermometer bulb is merely immersed in the water.

In use, the water is evaporated by the deep vacuum, so it is well to use a 5/16 in. or 3/8 in. o.d. copper tube instead of 1/4 in., so that the water can be added as necessary through this tube, rather than disassemble the parts in order to put in the water.

Table 1

(With Water In the Tube)

Thermometer Reading °F. (Dewpoint)	Pressure In In. of Mercury Vacuum
35	29.72
40	29.67
45	29.62
50	29.56
55	29.48
60	29.40
65	29.30
70	29.18
75	29.05
80	28.89
85	28.71
90	28.50
95	28.26
100	27.00

Table 1 is based on the saturated steam tables, and by using the dewpoint thermometer to determine the saturation temperature, the corresponding vacuum can be read from this table.

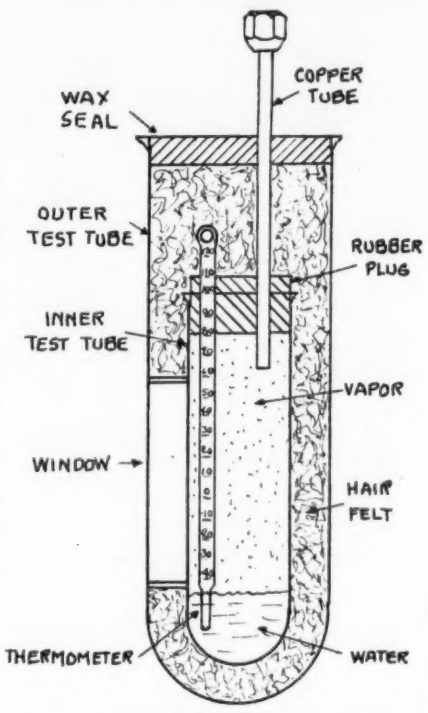


Fig. 1—Dewpoint indicator using two glass test tubes with insulation between them.

Table 2

(With Methyl Alcohol In the Tube)

Thermometer Reading °F.	Pressure In In. of Mercury Vacuum	Corresponding Dewpoint of Water Vapor (over ice)
—55	29.90	—10
—35	29.85	+12
—23	29.80	+23
—16	29.75	+31
—11	29.70	+37
— 6	29.65	42
— 3	29.60	47
1	29.55	
4	29.5	
10	29.4	
14	29.3	
19	29.2	
23	29.1	
26	29.0	
29	28.9	
31	28.8	
33	28.7	

Since the water would freeze if the vacuum were lower than about 29.7 in. of mercury vacuum, the dewpoint thermometer cannot be used to determine dewpoints lower than 32° F. nor vacuum below about 29.7 in. of mercury.

However, by using methyl alcohol of technical grade (not ordinary radiator alcohol) instead of water in the dewpoint thermometer, very low dewpoint temperatures and very low vacuum can be determined. Table 2 giving values for methyl alcohol, will then be used instead of Table 1.

In this manner the dewpoint thermometer can serve as a vacuum gauge at low vacuum and with a considerable degree of accuracy whether water or alcohol is used.

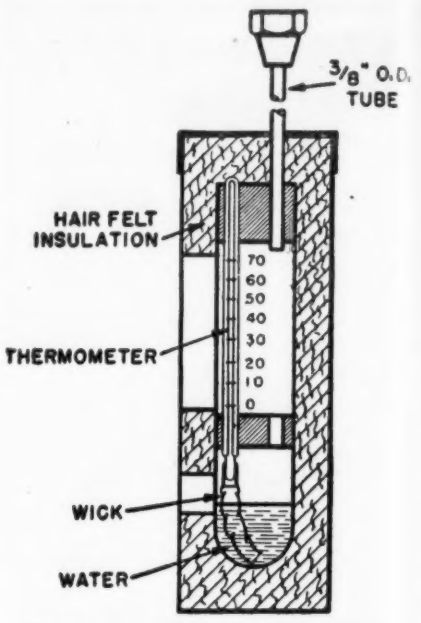


Fig. 2—Dewpoint indicator with metal case and wick from thermometer bulb to the liquid.

—Courtesy Detroit Lubricator Co.

speaking about

TRADE-INS

is a spiffy new 24-page booklet just published by the NEWS. It presents you with some fresh, dandy ideas on how to help eliminate one of your perennial bugaboos, the "trade-in" problem.

The whole problem is divided into three categories and some sound, sensible methods on how to deal with each category are described. 1. Acquiring the "trade-in" and determining its worth. 2. Reconditioning the "trade-in." 3. Marketing the "trade-in."

The whole contents of this booklet is compiled from the best articles on and experiences of other appliance dealers whom the NEWS has talked to in the past year. These ideas are actually used successfully and perhaps they would work as well or better for you. At least you can read about them and see how they fit in with your operation.

The booklet sells for 50¢ a copy. Order now! Use this coupon.

Business News Publishing Co.
450 W. Fort St., Detroit 26, Mich.

Please send me ..... copies of your new booklet "Speaking About Trade-Ins," at 50¢ per copy.

Name .....

Address .....

City ..... **State** .....

2-12-51

AIR CONDITIONING?

DOLE

Ice-Cel THE STORAGE BATTERY OF REFRIGERATION

CUTS COSTS 2 WAYS

- SAVES ON INITIAL INVESTMENT
- SAVES ON OPERATING COSTS

The DOLE Ice-Cel is a low-side especially designed for chilled water air conditioning systems where the load does not exceed eight hours a day. Ice-Cel units with capacities ranging from 12 to 75 ton-hours for 40° F. temperatures, can be pulled down slowly during non-use periods and discharged rapidly at peak loads. Thus in installations such as churches, cafeterias, auditoriums, banquet halls and mortuaries where cooling requirements are of short duration and charging can be done during hours when cooling is not required, a relatively smaller compressor can be used, as shown in this table.

SAVINGS with ICE-CEL vs.
CONVENTIONAL DIRECT EXPANSION SYSTEMS

Daily Hours of Use	Compressor Size Reduction	Initial Savings
2 hrs.	10 to 1	50%
4 hrs.	10 to 2	35%
6 hrs.	10 to 3⅓	20%
8 hrs.	10 to 4	10%

In addition to the savings in compressor investment, additional economies are possible in reduced size of cooling tower and in lower off-peak electric power bills. *Write for Engineering Bulletin 8-ES.*

DOLE manufacturing facilities including modern machinery and trained personnel for sheet metal working are available for the handling of Government orders. We invite your inquiries.

DOLE Vacuum COLD PLATES for REFRIGERATION PURPOSES

DOLE *REFRIGERATING CO.*

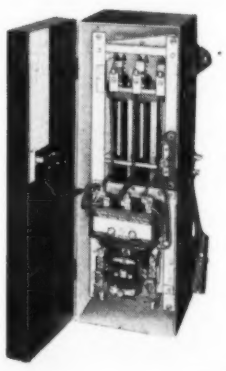
5920 N. PULASKI RD., CHICAGO 30, ILL.

103 Park Ave., New York 17

44 Elgin St., Brantford, Ont.

VELVET-SMOOTH COMPRESSOR STARTER

No Jolts to Belts or Machines—No Heavy Current Inrush



When you have a big compressor installation . . . or any job involving the starting of a heavy flywheel load . . . specify an Allen-Bradley Bulletin 640 (Manual) or Bulletin 740 (Automatic) compression resistance starter. These starters will accelerate the motor from standstill to full speed with velvet smoothness. They are easy on belts, chains, and gears, because machines are started without a jerk. Send for Bulletins 640-740. Allen-Bradley Co., 1313 S. First St., Milwaukee 4, Wis.

ALLEN-BRADLEY MOTOR CONTROLS for Air-Conditioning and Refrigeration.
Manual & automatic across-the-line starters.
Compression-type velvet-smooth starters.
Pressure and temperature switches & controls.
Relays and contactors from 1 to 8 poles.
Push buttons and selector switches.

A-B Quality

ALLEN-BRADLEY SOLENOID MOTOR CONTROL

QUALITY

FRANK HAWK

NORTON MILLER

* * *

Hawk, Miller Promoted By Cecil Boling Co.

NEW YORK CITY—Advancement of Frank C. Hawk to general sales manager and Norton R. Miller to assistant general sales manager has been announced by Cecil Boling, president of Cecil Boling Co. of New York, representative of the Bush Mfg. Co. and the Heat-X-Changer Co.

Hawk is a graduate of Lehigh university and was formerly associated with the York Corp., Peerless of America, Chrysler Airtemp, and the Worthington Pump & Machinery Corp. He has been a member of the Boling organization for seven years in the New York metropolitan area.

Miller attended the engineering schools of Pratt Institute and New York university and has been associated with the United States Air Conditioning Co. as eastern district sales manager, Trane Corp. as sales engineer, and with Chrysler Airtemp.

New Aluminum Order Bans Use In 200 'Less Essential' Items

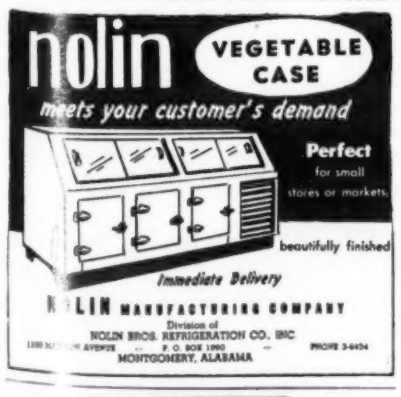
WASHINGTON, D. C. — In an order issued last weekend the National Production Authority listed more than 200 "less essential" items in which aluminum may not be used after April 1, and at the same time, said that by March 1 or "as soon thereafter as practicable" the use of natural rubber will be "eliminated generally" for certain products.

NPA's amended order M-7 also bans, starting June 1, the use of aluminum in the manufacture of "decorative or ornamental items, or the use of more or better grade aluminum than is necessary for the functional operation of any item." The order does not permit the use of aluminum for manufacturing functional parts for items other than those specifically prohibited.

Among the some 200 "less essential" items in which the use of aluminum is banned are few that affect the refrigeration or appliance industries. Some of the items specified are "beer equipment," "domestic laundry accessories"; "ice cream freezers for home use," "vending machines (except functional parts)."

The order also continues the previously announced aluminum limitations of 75% in February and 65% in March of the average monthly use during the first half of 1950.

By March 1, NPA said, it will take steps to ban natural rubber in "nonfunctional" household, industrial, and automotive rubber goods.



Curtis REFRIGERATION
AIR CONDITIONING COMMERCIAL

Packaged Air Conditioning Units
2 to 15 Tons
Condensing Units
¼ hp. to 40 hp.

Curtis Refrigerating Machine Division
of Curtis Manufacturing Company
1912 Kienlen Ave. St. Louis 20, Mo.
Established 1854

Profit Margin Freeze--

(Concluded from Page 1, Column 4)

markup permitted would be either the percentage markup or the dollars-and-cents differential between wholesale and retail price as of that date, whichever would be lower.

In other words, if a retailer paid $6 for an item and sold it for $10, he would be allowed 66⅔% or a $4 markup. As his current costs on the same item would in all probability be higher than $6 he would be able to take only a $4 markup rather than a 66⅔% markup, because that would be the lower of the two.

If the regulation reads this way, it is expected to run into plenty of opposition from retailers. Such a ruling would actually eliminate the computing of markups on a percentage basis, under present conditions of steadily rising costs.

Locker Plant Operator Pays Workers from Grocery Profits

ENGLEWOOD, Colo. — Devoting approximately 20% of South Broadway Lockers' floor space to a complete grocery store has been sufficient to pay salaries of all employes the year-round, according to L. L. Crocker, owner of the new $75,000 locker plant here.

Before authorizing construction of his all-ceramic-tile plant, Crocker visited other locker plants in the west and southwest to determine possible advantages which might be added to his own institution.

He noted that while most locker plants carried some food items, few of them had gone 100% into grocery retailing, as a concomitant to locker service and meat sales.

"I knew from personal experience that one feature which locker renters do not enjoy is the necessity of making two stops for groceries and meats," he indicated. "This actually doubles the amount of time to assemble the family's foodstuffs en route home in the evening. Therefore, I decided to make it possible for the locker renter to buy all of his standard groceries at one stop."

The result is an attractive grocery store, with all features of modern supermarkets, which is located all the way across the front of the impressive South Broadway Locker plant. With an inventory of $2,500, turning rapidly, Crocker's grocery unit carries everything from bread to housewares, the stock actually amounting to several thousand items.

SAME ITEMS AS SUPERMARKET

"We have not found it difficult to offer the locker renter customer the same choice of groceries which he can buy at the largest supermarket," Crocker added. "The only difference is that we carry much smaller quantities of each item to fit into more limited space."

Result of this installation has been that, except for a few unaccountable "slow sales weeks," profits from food sales are sufficient to meet the payroll of the locker plant.

In addition, handling so large a choice of foods has led directly to the current 100% occupancy of the plant's lockers. At least 25% of the renters became interested in locker service primarily through curiosity developed while buying groceries, Crocker said.

The plant has 600 all-steel lockers and a two-compressor York refrigeration system which provides a "standby" unit.

A 40-ft. chill and aging room, capable of accommodating 50 beef, is located on the right side. A 40-cu. ft. quick freezer is situated in a corridor at the rear for special swift service.

The processing room is located at the extreme right of the building, behind a 12-ft. meat counter. Like the rest of the plant, it is tiled throughout and extremely well-lighted through a "wall of glass" which forms the right side of the building.

Processing charges average 4 cents per pound, with locker rentals at $12.50 and $14 per year.

"Because of the completeness of the grocery stock, the plant averages around 50% more daily visitors than if food sales were limited only to locker renters," Crocker summed up. "We expect a large percentage of these to become locker patrons when we add additional lockers as contemplated."

Government Contracts

PROCUREMENT INFORMATION

The following is a list of proposed procurements issued by the various indicated U. S. Government procurement offices. This list is compiled and made available daily on a free pick-up basis. Prospective bidders may obtain complete bid sets by a request to the purchasing office under which the purchase is listed in this Synopsis. Be sure to identify completely the bid invitation you wish by including in your request the item description, the invitation number or reference number and the opening date. This will save time in filling your request. For reasons of economy, specifications are normally not included with the bid invitations unless the specification is a new one. First time bidders on a particular item should request a copy of applicable specifications and drawings at the time the request for a bid set is made.

DEPARTMENT OF DEFENSE

Description	Quantity	Invitation No.	Opening Date
District Public Works Office, Twelfth Naval District, San Francisco, Calif.			
Work Consists of Alterations and Additions to Existing Heating Plant to Provide Fully Automatic Oil Fired Low Pressure Steam Heating Plant Including Necessary Electrical Work, Minor Alterations to Piping, Breeching, and Brickwork at Naval Reserve Training Center, Ogden, Utah, No Deposit Required for Plans and Specs.		26312	14 Feb 51
Supply and Fiscal Officer, Naval Air Station, Pensacola, Fla.			
Cooler, Water, Electric, 10-Gal. Capacity, "Freon-12" Gas Refrigerant	10 ea	204-77	16 Feb 51
Commandant of The Marine Corps, Washington, D. C., Attn.: Supply Dept., Procurement Section			
Refrigerators, Electric, Portable, for Operation on 110-115 Volts, 60 Cycles, 1 Phase, a.c.	604 ea	1045	28 Feb 51
CO, Armed Services Medical Procurement Agency, Brooklyn, N. Y.			
Cooling Unit, 60-Gal. Capacity, Self-Contained, 110V, 60 Cyc., a.c.	4 ea	916	20 Feb 51
Commanding Officer, Marietta TC Depot, Marietta, Pa., Attn.: Central Procurement Agency			
Fittings, Brass, Compression And Flared	4,715 ea	273	1 Mar 51
Valve, Gate, Brass	90 ea	274	2 Mar 51
Valve, Globe, Brass	200 ea	274	2 Mar 51
Valve, Relief, Brass	10 ea	274	2 Mar 51
Valve, Refrigeration, Brass	25 ea	274	2 Mar 51
CO, Armed Services Medical Procurement Agency, Brooklyn, N. Y.			
Psychrometer, Sling	48 ea	918	21 Feb 51
Aviation Supply Office, 700 Robbins Ave., Philadelphia, Pa.			
Refrigeration Fittings			
Adapters	150 ea	H53878	21 Feb 51
Drain Cocks	125 ea	H53878	21 Feb 51
Male Connectors Compression	2,900 ea	H53878	21 Feb 51
Tube Fittings			
Commercial Brass Connectors	200 ea	H53878	21 Feb 51
Commercial Brass Elbows In Accordance with Military Spec. Mil-F-15049 Dtd 1 May, 1950	200 ea	H53878	21 Feb 51

GENERAL SERVICES ADMINISTRATION

Description	Quantity	Reference No.	App. Bid Date
Administrative Officer, Public Buildings Service, General Services Administration, 620 Post Office and Court House, Boston, Mass.			
Hot Water Heater	1 ea	BOS-51-196	2-20-51
Chief, Purchase Division, Federal Supply Service, General Services Administration, Denver, Colo.			
Electric Ranges	7 ea	2962	2-13-51
Chief, Supply Section, Public Buildings Service, General Services Administration, Washington 25, D. C.			
Valves, Water Pressure, Electrimatic NOS WL-1700 and WP-1720A or Equal	100 pcs	856	2-23-51
Chief, Purchase Branch, Federal Supply Service, General Services Administration, Room 528, U. S. Court House, 219 S. Clark St., Chicago 4, Ill.			
Refrigerators, Various Types, Gas and Electrically Operated	218 ea	CHD-1002	2-26-51
Ice Maker, Electric	1 ea	CHD-1002	2-26-51
Cabinet, Storage, Electric	2 ea	CHD-1002	2-26-51

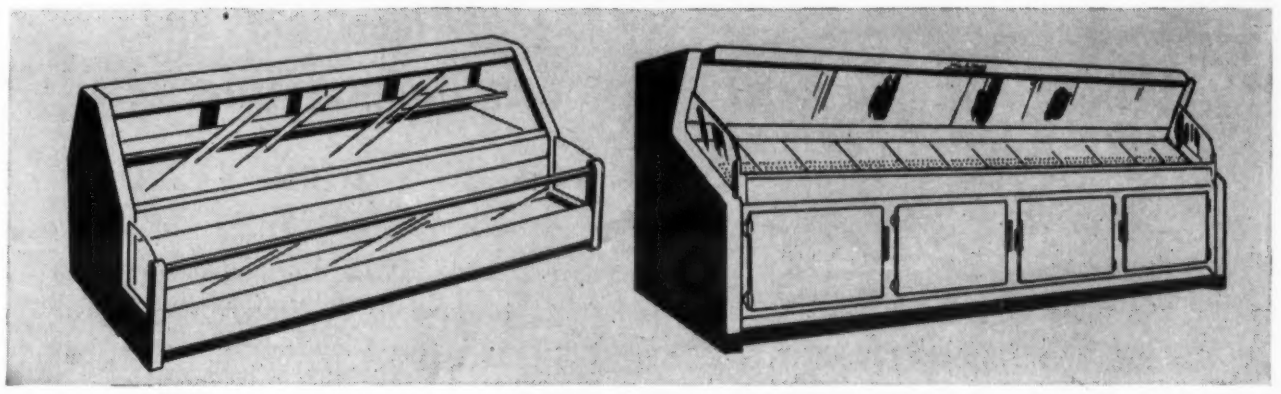
U. S. DEPARTMENT OF COMMERCE

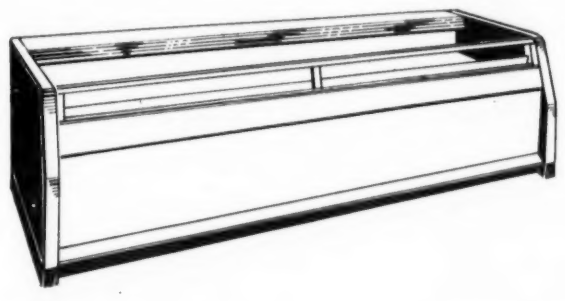
Description	Quantity	Reference No.	App. Bid Date
Chief, Procurement Section, National Bureau of Standards, 620 11th St., N. W., Washington 25, D. C.			
Valve, Angle	6 ea	B-2-1539-51	2-12-51
Fitting Flared Nut	100 ea	B-2-1541-51	2-12-51
Gauge Pressure	15 ea	B-2-1541-51	2-12-51
Elbow St., Galv.	18 ea	B-2-1541-51	2-12-51
Fittings, Connectors	30 ea	B-2-1541-51	2-12-51
Fittings, Elbow, 90 Degees	48 ea	B-2-1541-51	2-12-51

CONTRACTS AWARDED AS OF JAN. 31, 1951

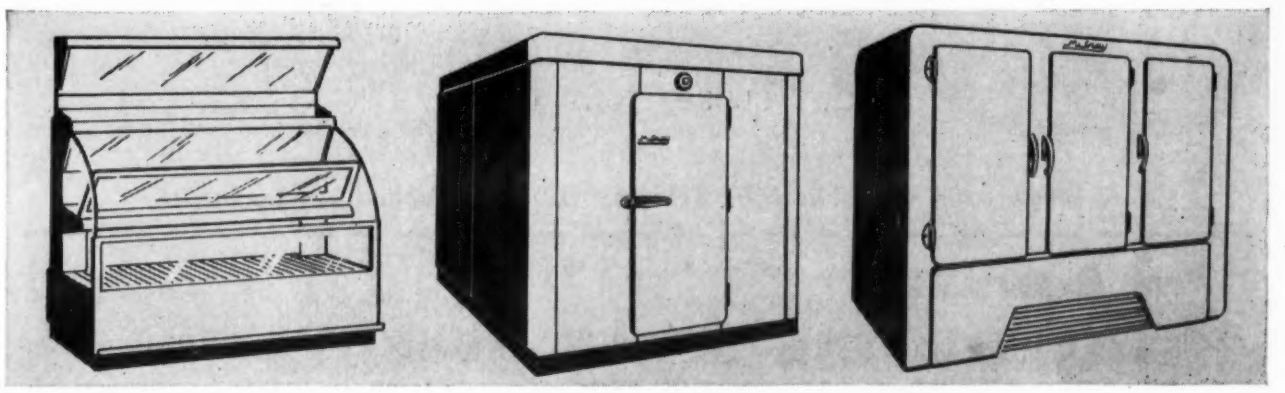
Description	Quantity	Dollar Value	Contractor and Address
Naval Air Material Center, Supply and Fiscal Department, Philadelphia 12, Pa.			
Air Conditioning and Control Equipment	1 ea	28,472.00	Arthur E. Magher Co., Inc., 175 Christopher St., New York 14, N. Y.
Aviation Supply Office, 700 Robbins Ave., Philadelphia 11, Pa.			
Cooling Unit, cabin pressurization for F2H-2 aircraft	190	162,450.00	Stratos Div., Fairchild Engine & Airplane Corp., Farmingdale, Long Island, N. Y.
Headquarters, Air Command, Wright-Patterson Air Force Base, Dayton, Ohio			
Temperature indicators, cl-05D		43,325	Lewis Engineering Co. Naugatuck, Conn.

If they're investment-minded...





Many a McCray owner is looking on his refrigeration equipment today as one of the best business investments he ever made. That's because there is a *right* case for every job . . . a case that has been built for beauty, for dependability, for efficient operation. Talk McCray Koldflo to your next customer. You'll do more than sell him . . . you'll *satisfy* him!



they'll go for a McCray KOLDFLO

Clip and Mail

McCray Refrigerator Company
1195 McCray Court, Kendallville, Indiana

Please send me information on the complete line of McCray Koldflo Commercial refrigeration equipment.

Name .....

Address .....

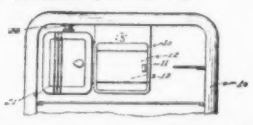
City ..... Zone ..... State .....

60th Anniversary

OF PRODUCING COMMERCIAL REFRIGERATION FOR EVERY NEED

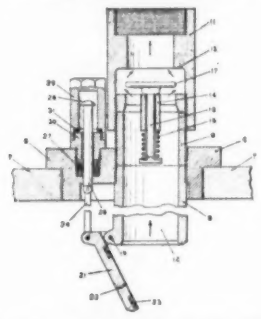
PATENTS *Week of September 12 (Continued)*

2,522,318. REFRIGERATOR APPLIANCE Clarence P. Swanson, Shreveport, La. Application Dec. 29, 1947, Serial No. 794,219. 6 Claims. (Cl. 62—1.)



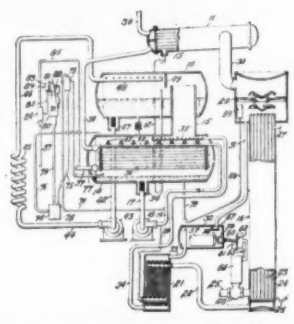
1. A food storage box comprised of an outer solid side wall, a solid top wall, a solid bottom wall, a solid rear wall, a front wall having an opening, a door for said opening and a side wall provided with an opening adapted to be positioned adjacent to the cooling coil unit of a domestic mechanical refrigerator, an outwardly disposed bead extending entirely around the perimeter of said opening in said side wall, a flexible washer mounted on said bead and a means for mounting said box on an inner wall surface of a domestic mechanical refrigerator provided with a cooling unit to bring said washer into contact with the cooling coil unit.

2,522,406. COMBINATION VALVE. John Knox Smith, Bartlesville, Okla., assignor to Phillips Petroleum Co., a corporation of Delaware. Application June 10, 1946, Serial No. 675,730. 4 Claims. (Cl. 137—21.)



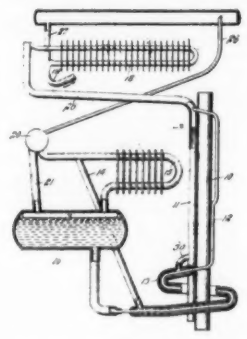
1. An excess flow valve mechanism comprising in combination: a valve body having a fluid conduit therethrough; a valve seat disposed in said conduit: a moveable valve head disposed in said conduit adapted to be moved by flow of fluid in excess of a predetermine rate to seat on said valve seat and thereby substantially close said conduit; a hinged closure member, having a bleed hole therein, attached to said body adapted to be swung on a hinge to substantially close said conduit; means for swinging said closure member to substantially close said conduit comprising in combination a link hingedly attached to said closure member and a moveable, manually operable push rod hingedly attached to said link, and means for confining movement of said push rod to a substantially rectilinear path; said closure member being adapted to be opened by gravity.

2,522,410. ABSORPTION REFRIGERATION APPARATUS. Albert R. Thomas, deceased, late of Evansville, Ind., by The National City Bank, administrator, Evansville, Ind., assignor to Servel, Inc., New York, N. Y., a corporation of Delaware. Application Oct. 25, 1944, Serial No. 560,216. 6 Claims. (Cl. 62—5.)



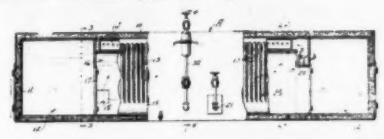
1. In an absorption refrigeration system having a plurality of element interconnected to provide a closed circuit for the circulation of refrigerant and absorption solution, exhausting means, a conduit connecting the exhausting means to one of the elements of the system to withdraw non-condensible gases therefrom, valve means between the refrigeration system and exhausting means for opening and closing the conduit to the flow of non-condensible gases, and a flexible diaphragm for operating the valve means, said diaphragm having its opposite sides subjected to the pressures occurring at opposite sides of the valve whereby to close the valve when the pressure on the exhaust side thereof is the same or greater than the pressure in the refrigeration system and to open the valve when the pressure on the exhaust side thereof is less than the pressure in the refrigeration system.

2,522,418. METHOD OF MAKING ABSORPTION REFRIGERATORS. Nils Erik Widell, Stockholm, Sweden, assignor to Aktiebolaget Elektrolux, Stockholm, Sweden, corporation of Sweden. Application Nov. 26, 1947, Serial No. 788,116. In Sweden April 26, 1944. 11 Claims. (Cl. 62—119.5.)



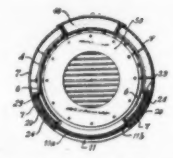
1. In the art of making an hermetically sealed absorption refrigeration apparatus in which circulation of liquid absorbent in its circuit is accomplished by lifting of liquid by vapor lift action, the improvement which comprises mixing with the absorbent before hermetically sealing the apparatus a substance, capable of penetrating all parts of the absorbent circuit in normal operation, which is dissolved, suspended or dispersed in the absorbent and possesses the property of influencing the surface tension of the liquid to promote an increase of the vapor bubbles formed in the liquid and also the vapor bubbles passing through the liquid, said substance comprising from about 0.1 to 5% sodium aluminate.

2,522,458. FREEZING MACHINE. Thomas McGrath, Neptune, N. J. Application Febuary 19, 1946, Serial No. 648,678. 3 Claims. (Cl. 62—3.)



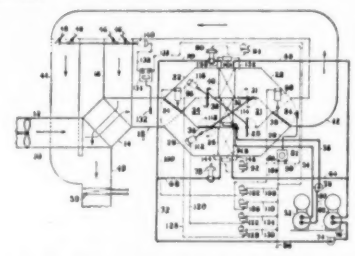
1. A chamber of the kind described, comprising a body forming an insulated enclosure, a freezing compartment within the enclosure formed by the body intermediate thereof, vestibules formed by the body outwardly of the compartment at opposite ends of the body and communicating with opposite ends of the compartment, doors closing the vestibules from the compartment, and a vertically tubed evaporator about the compartment.

2,522,465. REFRIGERATOR. Joe T. Romito, Ravenna, Ohio. Application April 9, 1945, Serial No. 587,331. 3 Claims. (Cl. 312—168.)



1. A refrigerating cabinet of cylindrical shape provided with a door opening comprising, a cylindrical wall consisting of a cylindrical lattice frame with a dome-shaped upper portion, two spaced cover sheets, both covering the entire cylindrical surface with the exception of the door opening, insulating material between said cover sheets, one of said sheets being secured to the lattice frame, the other being arranged at a distance therefrom, an arcuate door panel concentric with the cylindrical walls, a third arcuate sheet arranged within an arcuate portion of the space enclosed between the two cover sheets next to the door opening along an arcuate length corresponding to the length of the door panel, insulating material filling the space between the said third sheet and the inner cover sheets, an arcuate empty space forming a narrow compartment being left between the said third sheet and the other cover sheet, the said arcuate door panel being adapted to be moved into and out of said arcuate compartment.

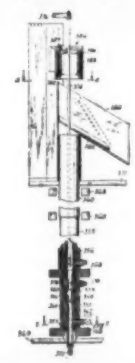
2,522,484. METHOD OF AND APPARATUS FOR CONDITIONING AIR. Clarence L. Ringquist and Robert G. Miner, La Crosse, Wis., assignors to The Trane Co., La Crosse, Wis. Application Oct. 4, 1948, Serial No. 52,738. 10 Claims. (Cl. 62—6.)



1. An air conditioning apparatus comprising an air to air heat exchanger having a first series of air passageways and a second series of air passageways in heat exchange relationship with each other, a casing having an inlet, and outlet, and two branch ducts connecting said inlet and said outlet, said inlet being connected to said first series of air passageways and said outlet being connected to said second series of air passageways, a chamber extending between said branch ducts, a cooling coil position in one of said ducts, a second cooling coil positioned in the other of said ducts, means for moving air through said first series of air passageways, then through said casing and then through said second series of air passageways, movable dampers for opening and closing each branch duct at each end, movable dampers for opening and closing each duct to the chamber at each side of each of the coils, means for controlling said dampers to provide for the flow of air through either of said ducts first as desired, and means for supplying refrigerant to the coil which is last in the path of air, a thermostat in the path of air leaving the casing, both of said last to mentioned means being responsive to said thermostat.

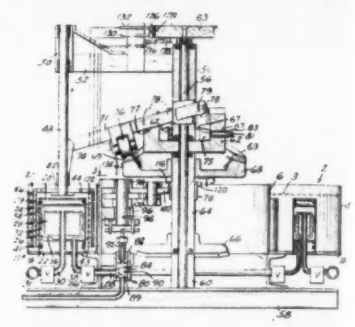
Week of September 19

2,522,506. ICE-MAKING APPARATUS. Crosby Field, Brooklyn, N. Y., assignor to Flakice Corp., Brooklyn, N. Y., a corporation of Delaware. Original application Aug. 30, 1946, Serial No. 693,994. Divided and this application April 5, 1949, Serial No. 85,531. 5 Claims. (Cl. 62—106.)



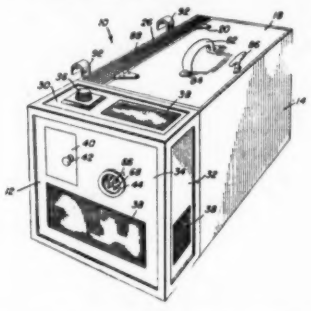
1. In ice-making apparatus, the combination of, a plurality of freezing tube assemblies having cylindrical internal freezing surfaces of different diameters which are positioned in axial alignment with the cylinder of smallest diameter at the bottom, a vertically positioned rod having a harvesting tip on its lower end which is adapted to enter and be frozen to the smallest cylinder of ice, and means to move said rod downwardly through said freezing tube assemblies and to position said tip in the smallest cylinder of ice and thereafter to harvest the smallest cylinder of ice and move the tip and the adhered ice upwardly step-by-step from one freezing tube assembly to the next thereby to build up a cylinder body of ice.

2,522,507. ICE-MAKING APPARATUS. Crosby Field, Brooklyn, N. Y., assignor to Flakice Corp., Brooklyn N. Y., a corporation of Delaware. Original application Aug. 30, 1946, Serial No. 693,994. Divided and this application April 5, 1949, Serial No. 85,532. 6 Claims. (Cl. 62—106.)



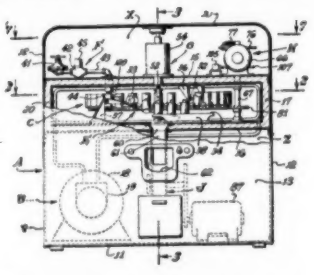
1. In ice-making apparatus, a plurality of individual freezing units presenting freezing surfaces upon which cylindrical bodies of ice of different diameters are formed, a harvesting element adapted to have ice formed thereto, means to move said harvesting element to and from said freezing units successively in accordance with the sizes of the respective bodies of ice, and means to harvest each body of ice from its freezing surface after it has been frozen to the harvesting element.

2,522,623. PORTABLE REFRIGERATOR. Carl A. Likes and Harry O. Kas, Ellis, Kans. Application Feb. 2, 1948, Serial No. 5,738. 3 Claims. (Cl. 62—4.)



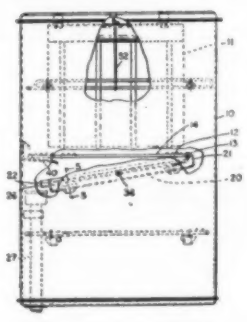
1. A portable refrigerator comprising a substantially rectangular housing, a substantially rectangular insulating wall within said container forming a storage compartment, one longitudinal side of said wall being spaced from the corresponding side of said housing to form a condenser compartment and one transverse side of said wall being spaced from the corresponding side of said housing to form a refrigerating compartment, a motor and compressor operatively connected thereto mounted in said refrigerating compartment, condenser coils connected to said compressor and extending into said condenser compartment, an ice cube tray in said storage compartment, an evaporator extending into said storage compartment and surrounding said ice cube tray, and plug means carried by said housing and operatively connected to said motor adapted to engage a socket of an electrical supply and energize said motor.

2,522,651. ICE MACHINE. Robert D. Van Vleck, Burbank, Calif. Application April 19, 1946, Serial No. 663,448. 15 Claims. (Cl. 62—106.)



1. Apparatus of the charcater described including, a case having a freezing chamber, a round carriage rotatably supported in the chamber on a vertical axle, a plurality of receptacles pivotally carried by the peripheral portion of the carriage, means operating the receptacles between upright and inverted positions, means for supplying water to the receptacles, means for ejecting ice from the receptacles, and refrigerating means including a refrigerant liquefying unit remote from the chamber and a cooling coil in the chamber refrigerating the entire chamber.

2,522,730. REFRIGERATOR CONSTRUCTION Carl J. Wagner, Detroit, Mich. Application March 15, 1948, Serial No. 14,826. 1 Claim. (Cl. 62—89.)



In a refrigerator, a transverse longitudinally inclined partition having its ends spaced from the adjacent refrigerator walls and having recesses in its side edges, the inner side wall of said refrigerator being embossed inwardly to provide integral supporting abutments receivable in said recesses and holding said partition from endwise displacement.

(To Be Continued)

SPEAKING OF *BIRTHDAYS* . . .

The Refrigeration and Air Conditioning Directory

IS IN ITS 20TH YEAR!

▼

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This is the book used countless times by all industry buyers because it carries up-to-date, authentic, easy-to-find data on companies, products, services, personnel.

For less than 2¢ per page per copy your advertisement in the 1952 DIRECTORY will be working overtime for lasting results.

(Initial Distribution at All-Industry Show In November)

▼

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Here is our . . .

ADVERTISING SPACE RESERVATION
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Reserve following space: ..... pages ..... ½ pages ..... ¼ pages ☐ color

Copy instructions or plate will reach you by (date) .....

We understand copy deadline is July 1, 1951. We need more information before placing order ☐

Rates: 1 page, $300; 2 pages, $550; ½ page, $190; ¼ page, $110; color, $100.

Mechanical Requirements: Page size: 4¾" x 7½"; ½ page: 4¾" wide x 3⅝" deep; ¼ page: 4¾" wide x 1¾" deep. Halftones: 110 screen.

COMPANY NAME .....

STREET .....

CITY ..... STATE .....

BY (INDIVIDUAL) .....

2-12-51

AIR CONDITIONING & REFRIGERATION NEWS, 450 W. FORT ST., DETROIT 26, MICH.

J. T. STONE

W. L. HULLSIEK

* * *

Stone, Hullsiek Take New Kelvinator, Leonard Posts

DETROIT—Appointment of J. Truman Stone as sales promotion manager of Kelvinator Div., Nash-Kelvinator Corp., has been announced by J. C. Bonning, advertising manager.

Bonning also announced that W. L. Hullsiek has been appointed Leonard advertising manager, succeeding Stone.

Stone has been advertising manager of the company's Leonard Div. for the past four years.

Stone first joined the Kelvinator advertising department in 1934, shortly after his graduation from the University of Michigan. His broad advertising experience includes positions as copy chief, account executive, sales promotion counselor, and sales promotion manager with several leading organizations, primarily in the appliance field.

After five years of air corps service, Stone developed the training film section for the Veterans Administration, and returned to Nash-Kelvinator in 1946.

Hullsiek has been Kelvinator-Leonard advertising and sales promotion manager of the corporation's Minneapolis zone for the past year. He joined the company in 1945 as district manager, after several years of sales and service work in the appliance field in Minnesota.

Bonning said Lowell Collins, former sales promotion manager, has transferred to the company's ice cream cabinet division as district manager in New York City.

Ohio Appliances To Distribute Schaefer Freezers In 2 States

MINNEAPOLIS — Schaefer, Inc., manufacturer of Pak-A-Way home freezers and Schaefer ice cream cabinets, announce the appointment of Ohio Appliances, Inc., as distributor for Pak-A-Way home freezers in its territories in Ohio and northern Kentucky.

Ohio Appliances, Inc., maintains offices and warehouses in Columbus, Dayton, and Cincinnati and is carrying complete stocks of Pak-A-Ways in each city.

Swift Mfg. Names Szandzik Assistant to V.P., Gen. Mgr.

HAZEL PARK, Mich.—Promotion of Alfred S. Szandzik to assistant to K. M. Schaefer, vice president and general manager of Swift Mfg. Co. here, has been announced by the company.

Formerly process engineer, Szandzik is a graduate of the University of Detroit and has been with the Swift organization since 1948. He will continue to supervise process engineering.

New Viking Humidifier

SEATED atop a giant-size working model of the Viking "2300" all-furnace humidifier is Tersa Layne, professional model who appeared at the recent International Heating & Ventilating Exposition which was held in Philadelphia. She is shown holding an actual-size model of the Viking "2300" humidifier in her hand.

New Television Show

SIGNING contract for a new video show ("Leo Carrillo's American Diary") is W. T. Ray, president of General Controls, which will sponsor the program. J. F. Ray, vice president, and Leo Carrillo, screen star, look on.

Warm Air Heating

Both Conventional, Panel Systems Satisfactory If Designed Properly

CHICAGO — Satisfactory comfort conditions can be obtained with conventional forced warm air heating, radiant ceiling panels (using forced warm air to heat the panel), or the new warm air perimeter system provided they're designed and installed in accordance with suggestions of the National Warm Air Heating and Air Conditioning Association.

So declared R. W. Roose of the University of Illinois in describing research conducted at the university under sponsorship of the warm air group before the Illinois chapter of the American Society of Heating and Ventilating Engineers.

Roland R. Reiche, production engineer, Economy Gas Furnace Co., was the second speaker on the program. He described a forced warm air gas furnace featuring continuous air circulation and variable heat input modulated by a bonnet temperature control.

Roose described Research Residence No. 2 which was used for a number of experiments and outlined some of the results. For a forced warm air system utilizing a gas furnace, an extended plenum type of trunk duct, rectangular branch ducts, and high wall supply registers, temperature gradients from the floor to the breathing level were of the order of 2.5° when the basement was heated and 4.5° when the basement was unheated.

For the radiant ceiling panel system, vertical temperature gradients under similar conditions were approximately 1.5° with the basement heated and 2.5° with the basement unheated. However, the horizontal temperature distribution was more satisfactory with the conventional system, he commented.

According to Roose, test results in Research Residence No. 3, a basementless residence having a concrete slab floor, indicated that the most satisfactory comfort conditions provided by warm air heating systems were obtained with the perimeter system.

This utilized warm air supply ducts imbedded below the floor in the concrete slab and near the outside walls with supply registers located below windows or at other points of relatively high heat loss. While some panel effect is obtained with this perimeter system, most of the heating is accomplished by warm air circulation.

Data on Figured Glass Revealed by ASHVE Lab

PHILADELPHIA—Another in the series of reports on solar energy transmission of glass, this on the figured rolled types, was presented to the 57th annual meeting of the American Society of Heating and Ventilating Engineers by members of the ASHVE Research Laboratory where studies on glass have been going on since 1944.

Design heat flow tables on figured glass such as were recently published for flat glass and glass block will be prepared, it was indicated by George V. Parmelee and Warren W. Aubele of the laboratory, who presented the paper.

Seven types of figured glass were studied:

1. Hammered heat absorbing glass; 2. hammered and etched heat absorbing glass; 3. ribbed flint glass with shallow ribs; 4. deep ribbed flint glass; 5. diffusing flint glass with small circular indentations; 6. hammered flint glass; and 7. hammered and etched flint glass.

With incident direct solar radiation it was found that glass types 1 and 2 transmitted a calculated 24.1%; types 3, 4, and 5, 82%; and types 6 and 7, 80.3%.

Suggested design values for diffuse solar radiation were also presented. These were 20% for the first type, 16% for type No. 2, 60% for type No. 3, 48% for types 4 and 7, 59% for type No. 5, and 63% for type No. 6.

CLASSIFIED ADVERTISING

RATES for "Positions Wanted" $5.00 per insertion. Limit 50 words. 10¢ per word over 50.

RATES for all other classifications $7.50 per insertion. Limit 50 words. 15¢ per word over 50.

ADVERTISEMENTS set in usual classified style. Box addresses count as five words, other addresses by actual word count. Please send payment with order.

POSITIONS WANTED

REFRIGERATION, AIR conditioning and heating man, desires position as service manager, service engineer or field service. Has 18 years' experience including service and installation, sales engineering, sheet metal, teaching and holding schools in the field. Broad experience makes up for the lack of an engineering degree. BOX 3670, Air Conditioning & Refrigeration News.

POSITIONS AVAILABLE

SALESMAN, WONDERFUL opportunity with Chicago distributor for, Hill, Carrier, Columbus, General, and other top lines specializing in complete installations for food marts, restaurants, bars, etc. Must know store planning. Replies treated confidentially. Write LEE SHELL COMPANY, attention Mr. I. W. Shell, 1141 West Madison Street, Chicago 7, Illinois.

EQUIPMENT WANTED

WANTED IMMEDIATELY: refrigerators in large quantities, open or sealed units, for shipment in parts to be assembled overseas. Write full details including specifications, prices, shipping and assembly to DAVID KESTENBAUM, 330 Seventh Ave., New York, N. Y.

EQUIPMENT FOR SALE

FOR SALE: 2—model LHS500 Dole Ice-Cel units, in eastern part of the country, used three months. BOX 3667, Air Conditioning & Refrigeration News.

LIMITED OFFER on water coolers, bottle type. All brand new, of popular manufacture, complete with condensing unit. Exceptional value at $109.00 each net FOB NYC, crated. Write, wire or phone GENERAL REFRIGERATORS CORPORATION, 678 Broadway, New York 12, N. Y. GRamercy 3-1222.

BUSINESS OPPORTUNITIES

ENGINEERING FIRM with no distribution facilities in field will sell tested motorless carbonator to responsible firm or individual. All rights, tools, fixtures, and inventory included. War time restrictions should make this carbonator interesting since it uses no motor or pump. Simple construction, low cost unit. Performance records available. Fine opportunity for someone in the business. BOX 3654, Air Conditioning & Refrigeration News.

FOR SALE: A long established appliance business in good county seat town, in So. Eastern Kansas. Franchised with best nationally known major appliances. Will sell at invoice value about $25,000. Reason: Want to retire. BOX 3671, Air Conditioning & Refrigeration News.

MISCELLANEOUS

NORGE SEALED units—remanufactured and exchanged. All SO_2 units converted to "Freon." Factory methods are used, and all work is supervised by Norge factory trained men. For additional information and prices write NORD HERMETIC COMPANY, 1701 San Leandro Blvd., San Leandro, California.

CROSLEY HINGE die, complete die for manufacture of Crosley curved hinges—Wonderful opportunity for someone with large press. These hinges are scarce and very much in demand; very good profit possible with small investment. BOX 3669, Air Conditioning & Refrigeration News.

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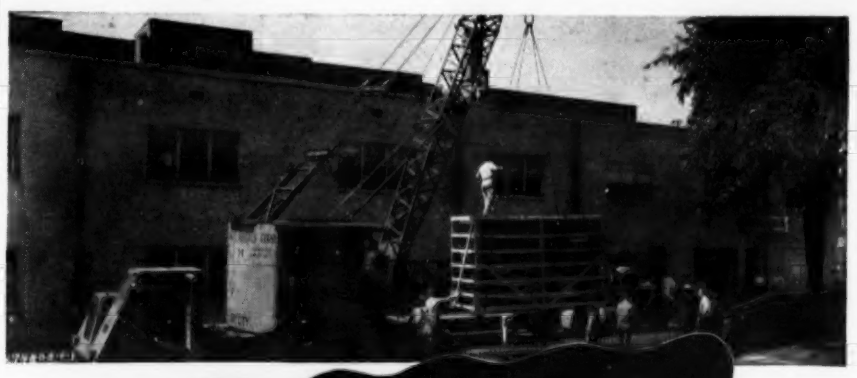


HOW TO SAVE UP TO $5,000 ON AIR CONDITIONING!

GOVERNAIR COMPLETELY PACKAGED AIR CONDITIONER

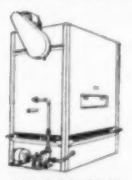
PAT. NO. 2,297,928

Save water! Save space! Save installation time and money! Save operating costs! Yes, install Governair and *save from $50 to $200 for each ton* of the completely packaged Governair unit designed to fit your needs!

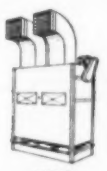
Experience proves Governair can save you up to $5,000 on a 50-ton Governair unit that gives greater dependability and more "engineered efficiency" than ever before!

If you want the best—if you want the most economical and reliable air-conditioning unit on the market . . . CHOOSE GOVERNAIR and SAVE!

AIR CONDITIONERS



EVAPORATIVE CONDENSERS



UNIT COOLERS

BLAST COILS FOR HEATING & COOLING

*ORIGINATORS OF COMPLETELY PACKAGED AIR CONDITIONERS

GOVERNAIR

GOVERNAIR CORPORATION · 513 N. BLACKWELDER · OKLAHOMA CITY, OKLA.

Smith Predicts Better Priority Setup--

(Concluded from Page 1, Column 3)

as an industry can do to sell the essentiality of refrigeration equipment to various government agencies and what you and other consumer industries can do to convince government agencies that refrigeration equipment is one of the life lines of your own industry.

"Nine years ago in the early days of OPM and WPB we got kicked around pitifully at the hands of the government career boys and the long-haired economists. I can speak from personal experience because I got into the act in Washington from the Spring of 1942 until the Fall of 1944.

"Nine years ago when the first priority system was set up, industrial refrigeration equipment upon which you depend for the operation of your business was classified with consumer durable goods and small household appliances, most of which had already been prohibited by limitation orders. At that time also most of the men who were processing your priority applications had absolutely no conception of your problems or ours.

"As a typical example, I recall an instance where one of these analysts had a worthy priority application for a 50-ton ice plant. He excitedly commented to some of his associates, 'Did you know that there is a company in Pennsylvania that makes an ice box that weighs 50 tons?' I ask you, gentlemen, do you want that kind of an individual passing on your requests for assistance?

"It could happen again, but I am optimistic enough to doubt it.

"Nine years ago our industry was disorganized, divided into a half a dozen or more segments each of which was promoting its own angles without regard for the other segments. Because we were disorganized we were unable to enlist proper support and cooperation from the powerful user industries such as your organization and others.

TODAY INDUSTRY'S UNITED

"Today the picture is different—we are a unified industry representing close to three quarters of a billion dollars annual volume. Our trade associations are already cooperating with consumer trade associations such as yours.

"Last July the Air Conditioning & Refrigerating Machinery Association appointed a 'Government Requirements Committee' of which I happen to be chairman.

"The objective of this committee was to keep the various agencies of the government informed as to our products, their uses, their essentiality, and the ability and facilities of our industry to contribute to the overall defense effort.

"We asked the Refrigeration Equipment Manufacturers Association and the Commercial Refrigerator Manufacturers Association to join with us and that they have wholeheartedly done.

INDUSTRY BROCHURE IS DRAMATIZING ROLE

"We have cooperated in the publication of an illustrated industry brochure of some 40 pages describing the essential uses of our equipment both in the civilian and military economy. . . .

"This brochure emphasizes the fact that during the past 60 years, the development and use of refrigeration as a food preserver have revolutionized food processing methods and established a new pattern of food production and distribution.

"The eating habits and health of the nation are now dependent on a long chain leading from farms and fisheries to refrigerated and air conditioned food processing plants—refrigerated warehouses, refrigerated railroad cars and trucks, refrigerated terminals and markets, the millions of refrigerated units in retail food stores and finally to the household refrigerator.

"Without refrigeration, great areas devoted to highly specialized crops would not be developed and the present agricultural picture of the country would be greatly changed.

"It emphasizes the fact that the cold storage warehouse industry is a vital link in the long chain of distribution from food producer to the consumer.

"Throughout the nation there are approximately 1,850 refrigerated warehouses having over 700 million cubic feet of space. As of January first a year ago these warehouses held 431 million lbs. of dairy products, 167 million lbs. of fish, 1,737 million lbs. of fruits, 1,100 million lbs. of meats and poultry, and 600 million lbs. of vegetables.

"This huge reservoir provided by the cold storage warehouse industry is indispensable to keep food supply and demand in reasonable balance avoiding seasonal market gluts and scarcities.

HEALTH ANGLE IS GETTING GOOD DEAL OF EMPHASIS

"Besides emphasizing the importance of refrigeration in the chain of food distribution, we also stress its importance in public health, hospitals, industrial applications in the metals, aircraft, automotive, electrical, chemical, textile, pharmaceutical, plastic, and many other industries.

"In addition we devote six pages to the military uses of refrigeration on land, at sea, and in the air.

"This brochure will be distributed to key individuals in Congress, Office of Defense Mobilization, Munitions Board and Department of Defense, NPA, Agriculture, Interior, Defense Transportation, and Labor.

Smith said he believes the industry is in "reasonably good shape at the moment" regarding maintenance and repair parts for existing equipment—with the possible exception of copper and steel pipe and motors.

"Unless, however, some sort of priority relief is set up by the government in the very near future for maintenance and repair items," he asserted, "this situation could change very quickly. I believe it is quite probable, however, that some sort of a priority assistance order for MRO will be issued by NPA.

"With respect to new equipment for expansion, alterations, and replacement, I believe it is reasonable to say that our industry in general has a backlog of orders ranging from three to five months depending on the size or type of the product.

"Now the cause for this period of backlog is not because of our inability to produce more compressors, condensers, and other accessories, but because of the ever lengthening lead time on raw materials and components."

Summarizing, Smith told the warehousemen that "if you will carry your story and other user industries will do likewise and we carry our story to all interested people in government, I believe we will be able to carry out our respective parts in the defense mobilization without asking for more than our just share and without undue hardships."

Coggin Sees Good 'Selling' Vital--

(Concluded from Page 1, Column 4)

pation in the defense program should become "intimately familiar" with the booklet, which was to be available soon.

But, Coggin cautioned: "Please don't construe these remarks to infer or even hope that by shoving this booklet under the nose of your local draft board that one of your countermen will gain exemption. We don't mean that.

"We do mean, however, that through our combined efforts in learning our story and then whispering it, screaming it, or both, to anyone who will listen and particularly to those who have to do with the actual controls affecting the industry, we can gain the recognition which it deserves."

'WE WON'T BE STAMPEDED'

He said his own company "was not stampeded the last time, nor will it be this time, into disrupting our important peace-time production and diverting it into what might immediately appear to be more lucrative war-time production.

"We supplied the industry with expansion valves and refrigeration accessories during the last war and had a cup awarded by your national organization to prove it. You may rest assured that our thinking remains unchanged in the present emergency."

Coggin recalled that World War II had progressed many months before the government recognized the mechanical refrigeration industry.

"It took a lot of hard work on the part of the industry's associations and many individual manufacturers working on their own . . . to gain recognition," he pointed out. "But this was finally accomplished for one and only one reason—we did a selling job.

WHERE REFRIGERATION FITS INTO DEFENSE ECONOMY

"We sold the idea that the preservation of food, whether in transit, in storage, or in the housewife's refrigerator, was right down the alley of the aims of our war effort. Namely:

"1. Protection of the public's health through prevention of food spoilage. 2. Economy for the self same reason."

The Refrigeration and Air Conditioning Conference was proclaimed "another outstanding success." Attendance was approximately 1,300, with 61 manufacturers exhibiting educational displays.

Among the speakers were Frank Y. Carter, chief sales engineer for Detroit Lubricator Co.; R. H. Luscombe, sales manager, Penn Electric Switch Co.; and Cyrus W. Miller, executive secretary of the Refrigeration Industry Safety Advisory Committee.

Carter discussed methods which could be used in the field for removing moisture from refrigeration systems.

Luscombe explained in detail methods for defrosting commercial refrigeration equipment. He covered the three methods—electricity, water, and hot gas (both with and without supplementary sources of heat).

Winners of the awards for educational displays in the order named were Detroit Lubricator Co., Mueller Brass Co., and Sporlan Valve Co. Presentation of the awards was made by Jack Glass, president of the Refrigeration Equipment Wholesalers Association.

The RSES banquet at the Baker hotel was attended by nearly 500 people. High spot of the evening was an audience participation number in which Isaac A. Boage, a blind service engineer of Lubbock, Tex., won first prize for his dancing. Boage barely edged out the runner-up, H. I. Garland, conference secretary at Dallas.

Members of the refrigeration industry who comprised the board of experts for the question-and-answer period each morning were:

L. W. Larsen, sales manager, Tecumseh Products Co.; William Wischmeyer, chief engineer, Sporlan Valve Co.; G. E. Graff, sales manager, Ranco Inc.; Bryant Britt, service manager, Wagner Electric Co.; John H. Spence, service manager, Hussmann Refrigeration, Inc.; Israel Kramer, president, Kramer Trenton Co.; Edward Kellie, president, Aminco Refrigeration Products Co.

Also R. H. Israel, sales manager, Refrigeration Division, Virginia Smelting Co.; F. Y. Carter; E. E. Thompson, technical service engineer, Davison Chemical Corp.; R. H. Luscombe; H. T. Jarvis, vice president, Refrigeration Engineering, Inc.; Paul Domke, field promotion manager, Mueller Brass Co.; George Boepple, sales manager, Alco Valve Co.

The next educational conference sponsored by the Refrigeration Equipment Manufacturers Association and the Refrigeration Service Engineers Society will be held at the Hotel Statler, Buffalo, N. Y., on April 6, 7, and 8, 1951.

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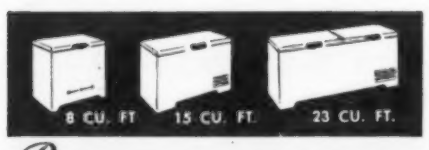

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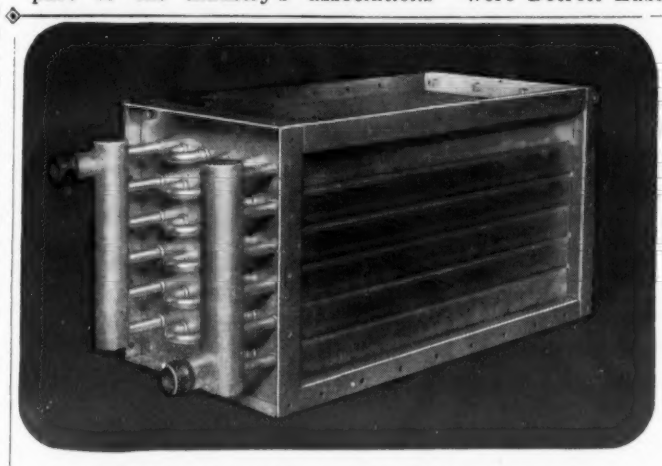

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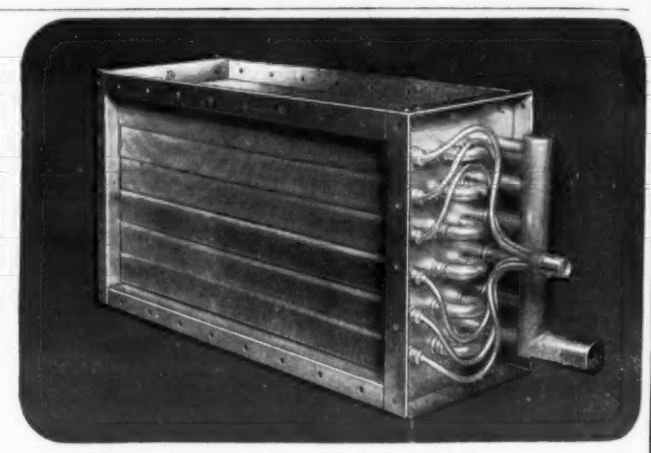

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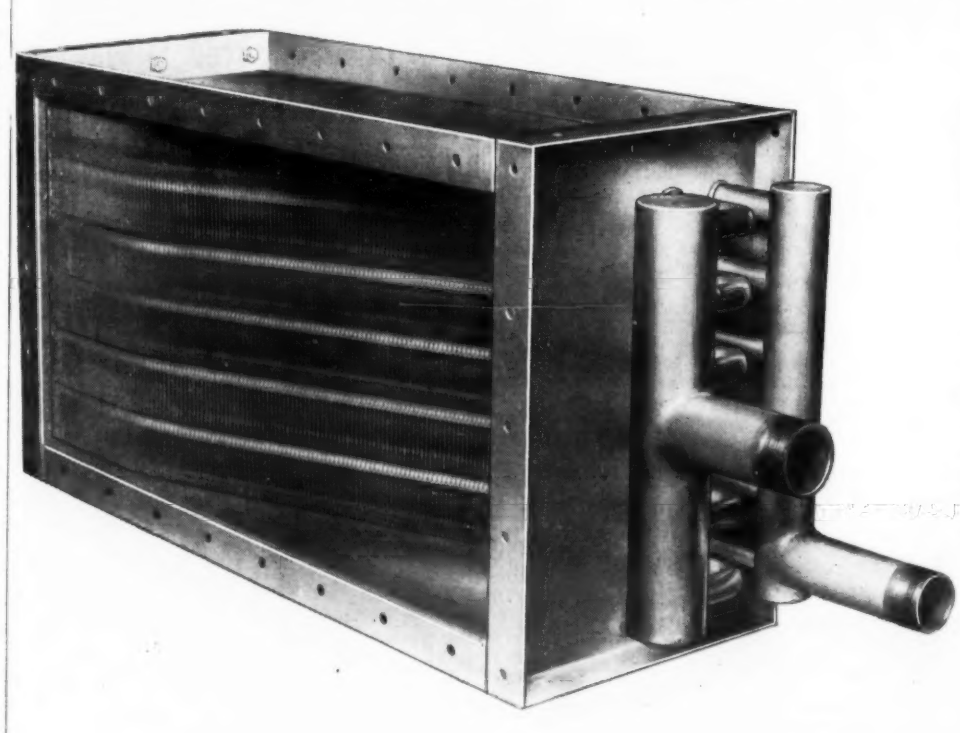

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